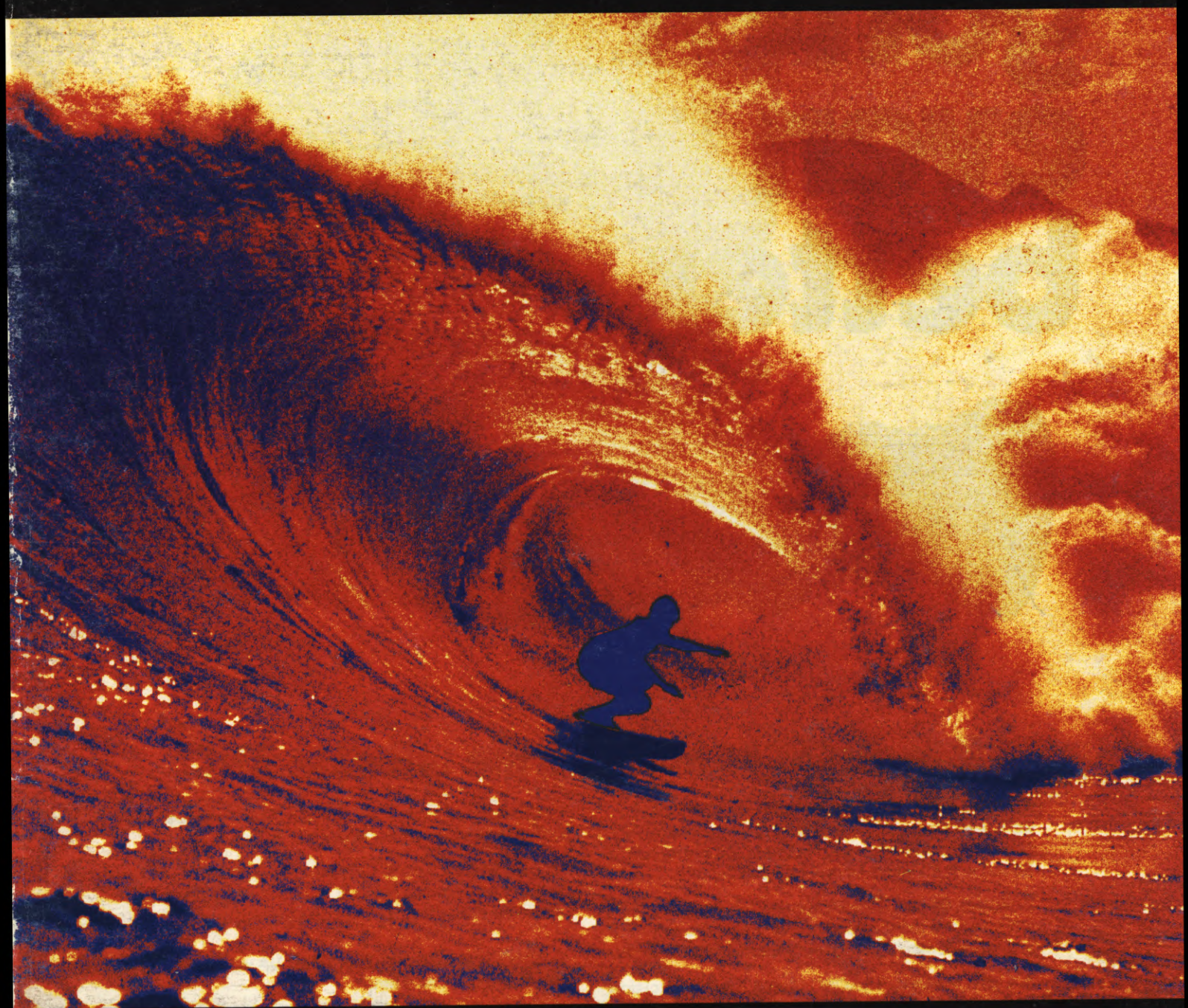
American Cinematographer
International Journal of Motion Picture Photography and Production Techniques
JUNE 1978/$1.50



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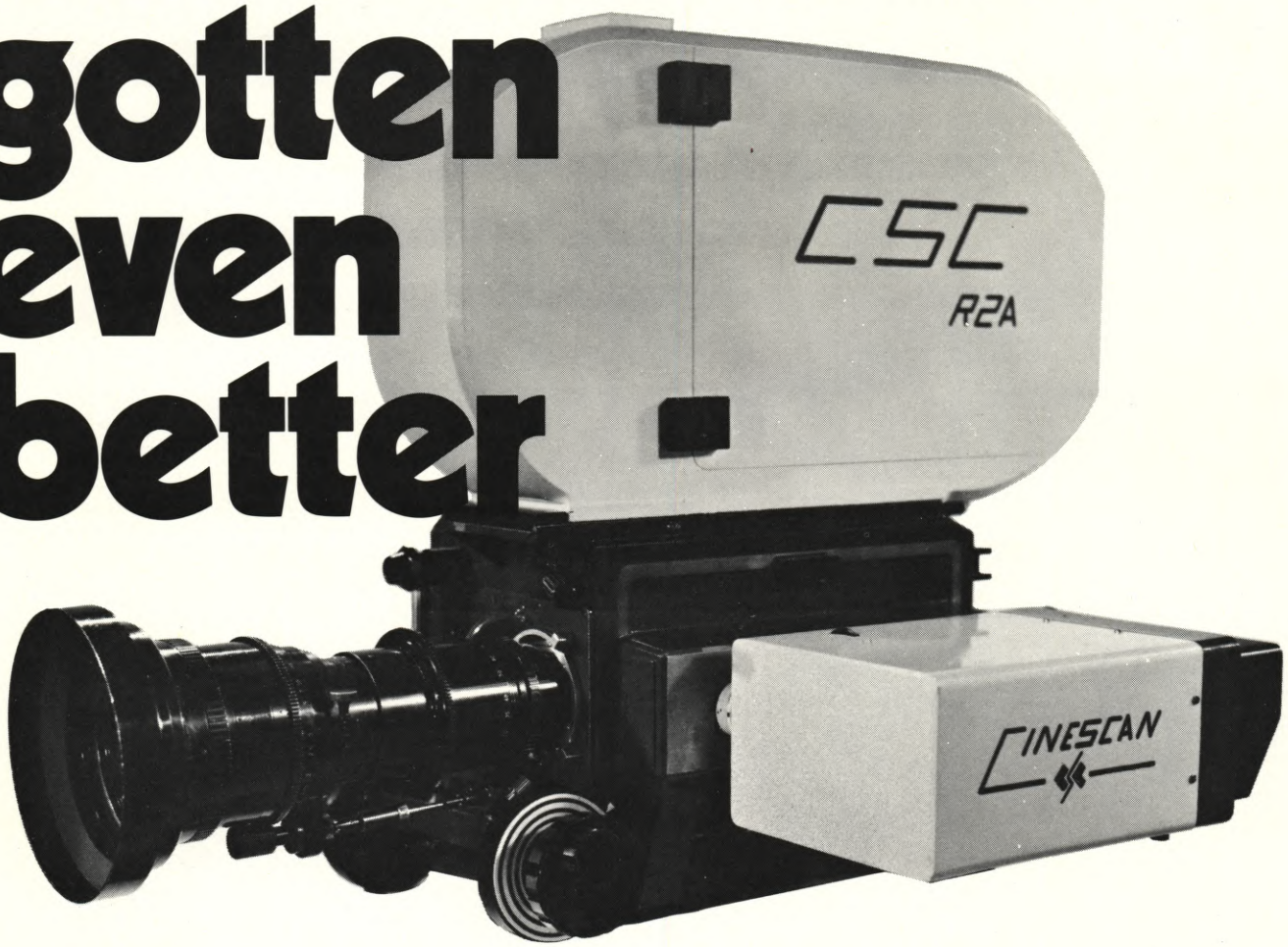


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# American Cinematographer

International Journal of Motion Picture Photography and Production Techniques


*The American Society of Cinematographers is not a labor union or a guild, but is an educational, cultural and professional organization. Membership is by invitation to those who are actively engaged as Directors of Photography and have demonstrated outstanding ability. Not all cinematographers can place the initials A.S.C. after their names. A.S.C. membership has become one of the highest honors that can be bestowed upon a professional cinematographer. a mark of prestige and distinction.*


**JUNE 1978** **VOL. 59, No. 6**



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ON THE COVER: In a scene from "BIG WEDNESDAY", an A-Team Production for Warner Bros. release, a surfer rides inside the curl of the wave. Cover design by HERB A. LIGHTMAN. Original photograph courtesy of SURFER MAGAZINE. Posterization by WARNER COLOR LAB.


**AMERICAN CINEMATOGRAPHER,** established 1920, in 59th year of publication, is published monthly in Hollywood by ASC Holding Corp., 1782 North Orange Drive, Hollywood, California 90028. U.S.A. **SUBSCRIPTIONS:** U.S. $9.00; Canada, foreign, including Pan-American Union, $10.00 a year (remit International Money Order or other exchange payable in U.S.). **ADVERTISING:** rate card on request to Hollywood office. **CHANGE OF ADDRESS:** notify Hollywood office promptly.


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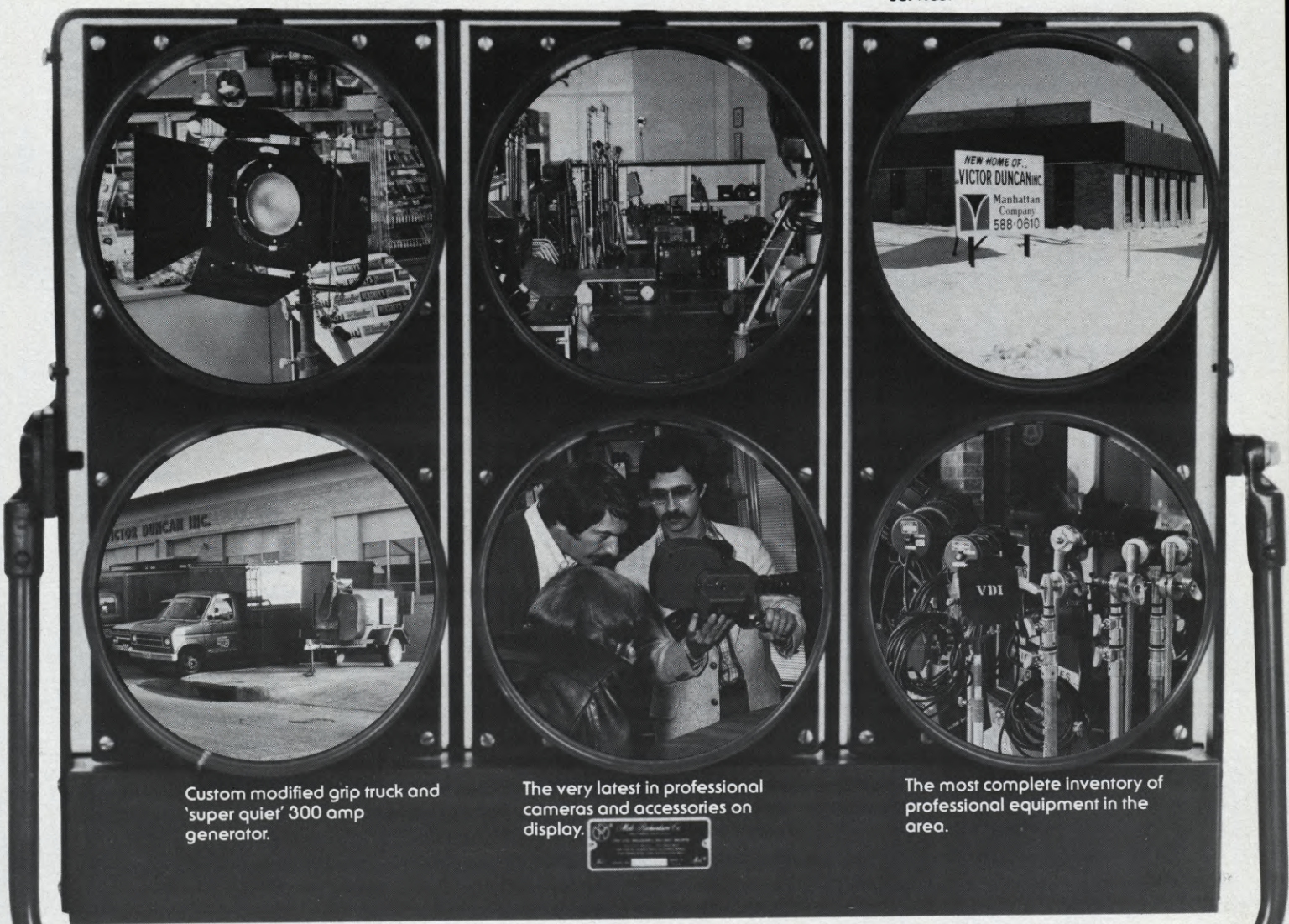


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### NEW MILLER TRIPOD SPREADER PROMOTES FASTER CAMERA SET-UPS

A compact, easy to transport, lightweight aluminum and steel tripod spreader is the newest addition to the Miller line of quality photographic and TV support equipment.

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Extra strong shock cords hold the tripod feet firmly to the spreader and cannot be damaged like threaded clamps.

Professional and amateur production teams will find this reliable unit a must in studio or on location.

Weight: 3 lbs.

Length Folded: 16½ inches

Maximum Diameter Folded: 3½ inches

Each arm extends from 16½ inches to 25 inches.

For further information write, Miller Professional Equipment, 6500 Santa Monica Blvd., Los Angeles, CA 90038.

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### INTRODUCING THE WORLD'S MOST VERSATILE STOP WATCH

The St. Charles timepiece is an LCD Quartz digital stop watch, timer, chronometer, clock and time-calendar. It features a total of eleven different functions which make it the most multi-purpose instrument of its kind.

Solid state dependability and ultra-precise engineering make it more accurate than any mechanical stop watch, and an LCD six-digit display makes it easy to read in bright sunlight. The St. Charles is an integrated unit which provides the following stop watch functions: standard start/stop, Taylor, split, and event time out. It also features these time/calendar functions: hour, minutes, seconds, month, date, day of the week and AM/PM indication.

Each St. Charles stop watch measures up to 60 minutes and starts over at :00. It also comes equipped with small penlight for night timings and a display light for reading in the dark. There is a small accessory compartment which holds a nylon neck lanyard, and the unit operates in complete silence. The watch is powered by one 1.5 volt (Union Carbide 386) silver oxide battery, and the penlight operates on one 1.5 volt (UM5) battery. The St. Charles is lightweight (2 oz.) and compact; 3-3/16" long, 1-5/8" wide and 1/2" thick. This fine time-piece comes complete with a one-year warranty.

Dealer inquiries are invited.

Shiva International; 3921 Wilshire Blvd.; Suite 401; Los Angeles, CA. 90010; Telephone: (213) 383-8401; Telex: 686453; Cable: BALLCORP.

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### NEW ARRI 16SR VIDEO COUPLING

A video monitoring system for the Arriflex 16SR has been announced by Arri Corporation, Elmsford, N.Y. The Video Coupling was designed by Arnold & Richter especially for the 16SR, and is exceptionally compact and perfectly matched to the camera.

Attaching the Video Coupling is simple and can be done easily by the cameraman. The standard viewfinder of the 16SR is replaced with a special video finder containing a unique combination of optical elements which brings the reflex image equally to the video camera and cameraman's viewfinder simultaneously.

The regular eyepiece is positioned on one side of the finder and the video camera on the other. Optics and electronics are all preadjusted and prealigned, and the video camera is powered from a 12-volt DC battery, so that it can be used anywhere the 16SR can go.

A coaxial cable connects the video output to as many as three studio monitors or modified television receivers at the same time for those filming jobs where it is essential for more than one person to monitor the action. By employing a suitable video tape recorder, takes can be recorded for immediate playback as an aid to production control.

The Arri Video Coupling is available in three video-camera versions. They differ in the type of picture tube used, either a Nuvicon, a Vidicon, or a Vidicon-Silicon. Prices for the system start at $4,873.00.

For further information, contact authorized Arriflex dealers or Arri Corporation, 1 Westchester Plaza, Elmsford, N.Y. 10523.

•

### ADJUSTABLE SHOULDER POD WITH FORM-FITTING SHOULDER PAD

This shoulder pod can be used with professional 16mm cine cameras, Cine-8 cameras, as well as lightweight video cameras.

Because of its adjustable, form-fitting shoulder pad, no metal surface touches the user's shoulder. The pad always remains straight across the shoulder when the unit is swung from right to left. The belly brace is adjustable up or down to insure maximum comfort.

This unit is also available with an opening in the platform for power cord used in video equipment such as Sony and Akai.

For further information write, Miller Professional Equipment, 6500 Santa Monica Blvd., Los Angeles, CA 90038.

•

### ANNOUNCING THE WEAVER/STEADMAN FLUID CRANE

This unique piece of equipment was designed by the cameramen who developed the concept of a Balanced Fluid Head, and is both a logical extension of that basic design concept, and a companion. The crane makes it possible for the cameraman to execute complex moves at will, giving his footage the spontaneous quality of a hand held shot with the steadiness and control that only a totally balanced system can achieve.

The crane weighs 75 pounds; when this low inertial movement is combined with the specially engineered fluid bearings and the extreme stiffness of an epoxy/carbon fiber and aluminum matrix, you get smooth responsive control.

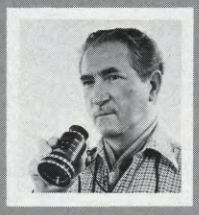
Versatility: the crane can be quickly mounted on any dolly (Bob Steadman recommends the Elemack because of its inherent stability) or tripod legs, and will float any camera)lens combination up to 60 pounds.

For information call Bill Weaver (213) 395-6470.

## introducing the Mark IV

# director's viewfinder

## with 10:1 zoom



The all-new Mark IV 10:1 Zoom Director's Viewfinder is an indispensable tool for the director or cameraman in composing scenes and choosing the appropriate lenses. It is the first and only viewfinder to offer a zoom ratio of 10:1 for both 35mm and 16mm film formats, making it compatible with most standard professional zoom lenses. It is a practical, easy-to-read viewfinder that was designed after many years of research to meet the specific needs of the film director and cameraman working in the 16mm and 35mm motion picture and television fields.

**Among the exclusive features of the new Mark IV 10:1 Zoom Director's Viewfinder are:**

- Easy-viewing, direct-reading scales calibrated in lens focal lengths. No numbers to compute.
- Optical-quality coated glass lenses.
- Lightweight, sturdy, precise construction. Weighs only 13 ounces.
- Focusing eyepiece with collapsible rubber eye cup.
- Smooth zoom movement patterned after camera zoom lenses.
- Click-stop aspect ratio controls for selecting formats of 1.33, TV Safe Action Area, 1.66, 1.85 and 2.35.
- Three windows on barrel of viewfinder for easy readouts of focal length of specific lens for 16mm and 35mm Academy or 35mm Anamorphic format.
- Image viewed is 50% larger and gives brighter and higher quality image than any other director's viewfinder now available.

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# TV EQUIPMENT FROM SAMUELSONS

Samuelsons, long known for their Samcinevision TV viewfinder systems for film cameras, also have available an ever increasing range of Close Circuit TV equipment, both colour and black & white, for all purposes. Here are just some of the range:

SONY U-MATIC EDITING SUITE. Two Sony Edit-U-Matic VO2850P PAL colour recorders with Convergence ECS1B editing control, convergence TT-6 timer, one colour and two b&w monitors, waveform monitors and transportable consol unit.

SONY EDIT U-MATIC VO-2950P PAL colour recorder – with or without SM2 Convergence joystick control (to give fast forward or reverse, slow-motion, variable speed or stop from playback). Also available (left) with Samcinevision transportable consol unit with fitted b&w video monitor and waveform monitor.

SONY U-MATIC VO-1810 PAL colour recorder – will also play back NTSC;

JVC-6440 U-MATIC FORMAT VCR, PAL colour recorder with RF tuner for off-air recording.

JVC HR3300 VHS ½in. 3 hour PAL colour recorder with RF tuner for off-air recording.

SONY 3670 b&w reel to reel recorder. Slow motion and stop frame playback facilities.

SONY "ROVER" AV3400 b&w. Battery operated, reel to reel recorder (below). Available with or without Sony AVC3450 b&w portable TV camera.

IKEGAMI CTC 3 x 1in. Leadicon tube broadcast type colour camera.

AKAI CVC150 portable colour camera.

SONY AVC3250 b&w CCTV camera.

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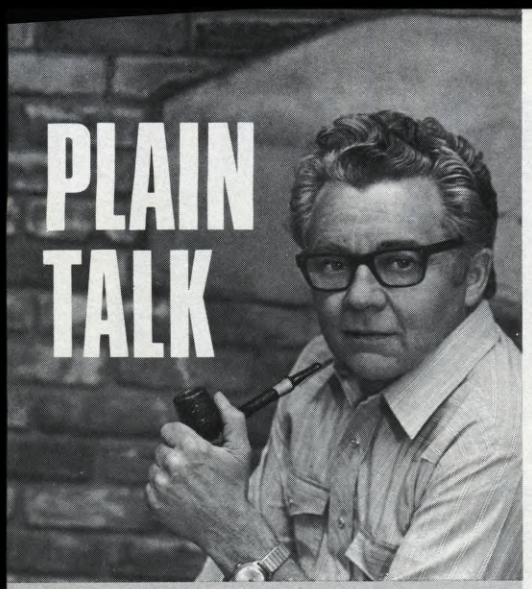


by J. Carl Treise

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We're hearing a lot these days about "modular design."

It's a good concept. The manufacturer creates a basic "building block" and then repeats it as often as needed to get the desired result.

Modular design is ideal, because it's flexible. But, to work properly, it must have an equally flexible support system.

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Get the picture?

In other words, whenever a processor manufacturer changes the number or arrangement of modules, he has to change the support system itself to provide the proper base. If his system is flexible and designed so that parts can be added or removed without losing efficiency, you're in clover.

Otherwise, you'll pay through the nose for a good concept, but a lousy operating unit.

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# INDUSTRY ACTIVITIES

## DGA, MUSEUM, FANS TO HONOR LEE GARMES

Lee Garmes, Vice-President of the American Society of Cinematographers, and one of the most accomplished men in the film industry, will be honored on June 2nd, at 8:00 p.m. with an in-person tribute presented by The Los Angeles County Museum of Art in association with the Directors Guild Special Projects. As Cinematographer, Director, and Producer, Garmes has been helping to enlarge the art of film for sixty active years.

As Director of Photography, he collaborated with such Directors as Von Sternberg, Alexander Korda, Howard Hawks, Henry Hathaway, William Dieterle, King Vidor, William Wyler, Alfred Hitchcock, Robert Wise—and many other greats.

Beginning with a complete screening of THE SCOUNDREL, written by Hecht and Charles MacArthur, starring Noel Coward, and photographed, co-produced, and co-directed by Garmes, the evening will mingle personal reminiscence by three generations of professional colleagues and friends with excerpts from films on which Lee Garmes worked, including SHANGHAI EXPRESS, WHOOPEE, GONE WITH THE WIND, CAPTIVE CITY, ZOO IN BUDAPEST, and THE BIG FISHERMAN.

In his autobiography Ben Hecht said, ". . . nothing I ever encountered in the movies was as uniquely talented as the eyes of Lee Garmes . . . more learned about moviemaking than anyone I met in movieland." Here is a chance to meet the man, see his work, and participate in a deeply-felt and richly-deserved homage.

Members of the public are invited to join A.S.C. and Directors Guild members; tickets are available for $2.50 each directly from the Leo S. Bing Theater at the Los Angeles County Museum of Art, 5905 Wilshire Boulevard, Los Angeles 90036.

•

## SICKLES, INC. SPONSORS SLIDE SEMINAR

In the last few years, Sickles, Inc. has conducted dozens of two-day creative Slide Seminars. In order to offer the ultimate seminar, Sickles has recently teamed up with Spindler and Sauppé, who are the leading multimedia presentation people, and added a new dimension to the seminars.

The new seminar format is a combined two-part, four-day learning experience. The first two days are devoted to acquiring advanced slide production skills. The second two days is on professional slide presentation using the most modern multi-media equipment.

This Super Seminar is a great way to get your act together and no one offers a more comprehensive slide production and presentation seminar. Plan to attend one of the Super Seminars this fall; dates are: August 14-18 Seattle, WA; September 7-11 Minneapolis, MN; November 6-10 Phoenix, AZ; December 4-8 Tarrytown, NY; December 14-18 Washington, D.C.

For additional information on registration and fees contact Ms. Rhetta Shorr, Seminar Coordinator, Sickles, Inc., P.O. Box 3396, Scottsdale, AZ 85257, 602/967-1492.

•

## O'CONNOR RECALLS EARLY MODEL 30'S

Chadwell O'Connor, President of O'Connor Engineering Labs announced a recall of all Model 30 fluid camera heads with Serial Numbers 308764175 or smaller because of defective shoes used in the fluid for both pan and tilt action. Neither the drag range or maximum drag are up to Mr. O'Connor's standard of acceptable performance.

O'Connor will install new shoes in all Model 30's at no cost to the customer. This will make a significant improvement in the operation of the head.

The turn around time on these heads in plant will not exceed three days. If one ships United Parcel, Blue Label, O'Connor will pay the freight. Any special shipment by any other carrier will be at the customer's expense.

From United States ship to: O'Connor Engineering Laboratories, Inc., 100 Kalmus Drive, Costa Mesa, CA 92626.

From Europe ship to: O'Connor Engineering Limited, 11 Rue des Moraines, 1227, Carouge, Geneva, Switzerland.

From Canada ship to: Cinquip Division, 41 Scollard Street, Toronto, Ontario M5R 1G1.

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You could still smell the smoke when this Sennheiser shotgun condenser microphone came in for repairs. The studio where it had been in daily use for years was devastated.

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The studio had no idea how badly the mike was damaged. They couldn't test it. Their equipment had been all but totalled. So they returned the mike to us.

Dubiously, we put the unit on a test bench to see what needed to be done.

We had to replace the shock mount fittings. And clean up the mike cosmetically. That was easy. And that was *all*.

After all it went through, this Sennheiser shotgun microphone still met all our original factory specifications. With the same wide, flat response. Ultra-tight directionality. High sensitivity. And freedom from overload.

Of course, there's no need for such extremes to prove how much you can depend on Sennheiser. Rugged design, precision craftsmanship and the fact that Sennheiser RF condenser microphones don't use high-voltage DC bias (which can cause arcing) have all contributed to our reputation for unsurpassed reliability. And helped make Sennheiser the industry standard over the years.

For more information about our remarkable condenser microphones, see your Sennheiser dealer or contact us. Either way, you'll get a warm reception.

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# CINEMA WORKSHOP

By ANTON WILSON

**LENSES—ARRIFLEX 16BL AND 16SR**

A quick survey of professional 16mm cameras and lenses reveals that Arri-mount lenses enjoy the greatest popularity, both in terms of quantity and the ability to be used on almost all professional cameras. Both Eclair and Cinema Products offer Arri-type mounts for their reflex cameras, while a wide variety of Arri "adaptors" make these lenses almost universal. However, there is an interesting and quite esoteric paradox to this universality. Certain Arri lenses *cannot* be used with the Arriflex 16BL and 16SR cameras. That's right. While all Arri-mount lenses can be used on almost all cameras, certain Arri-mount lenses cannot be used with Arriflex's own 16BL and 16SR. This incompatability applies only to a very few Arri lenses. However, the popularity of the 16BL and 16SR, and the potentially horrendous results of a mismatch prompt me to relate the facts (and, in any case, it is an interesting story).

The principle of the mirror-reflex shutter is quite simple. The mirror-shutter deflects the image onto the ground glass during pull-down, while allowing the light to pass freely onto the film during exposure. The crucial point here is that the ground glass must be located at precisely the same distance from the mirror as the film plane. Thus, if the ground glass image is in focus, so is the film plane image. The original Arri 35 design placed the ground glass at 90 degrees alongside the aperture. This is the most effective and simple solution, as the lengths of the light path to the film plane and to the ground glass (via the mirror) are identical.

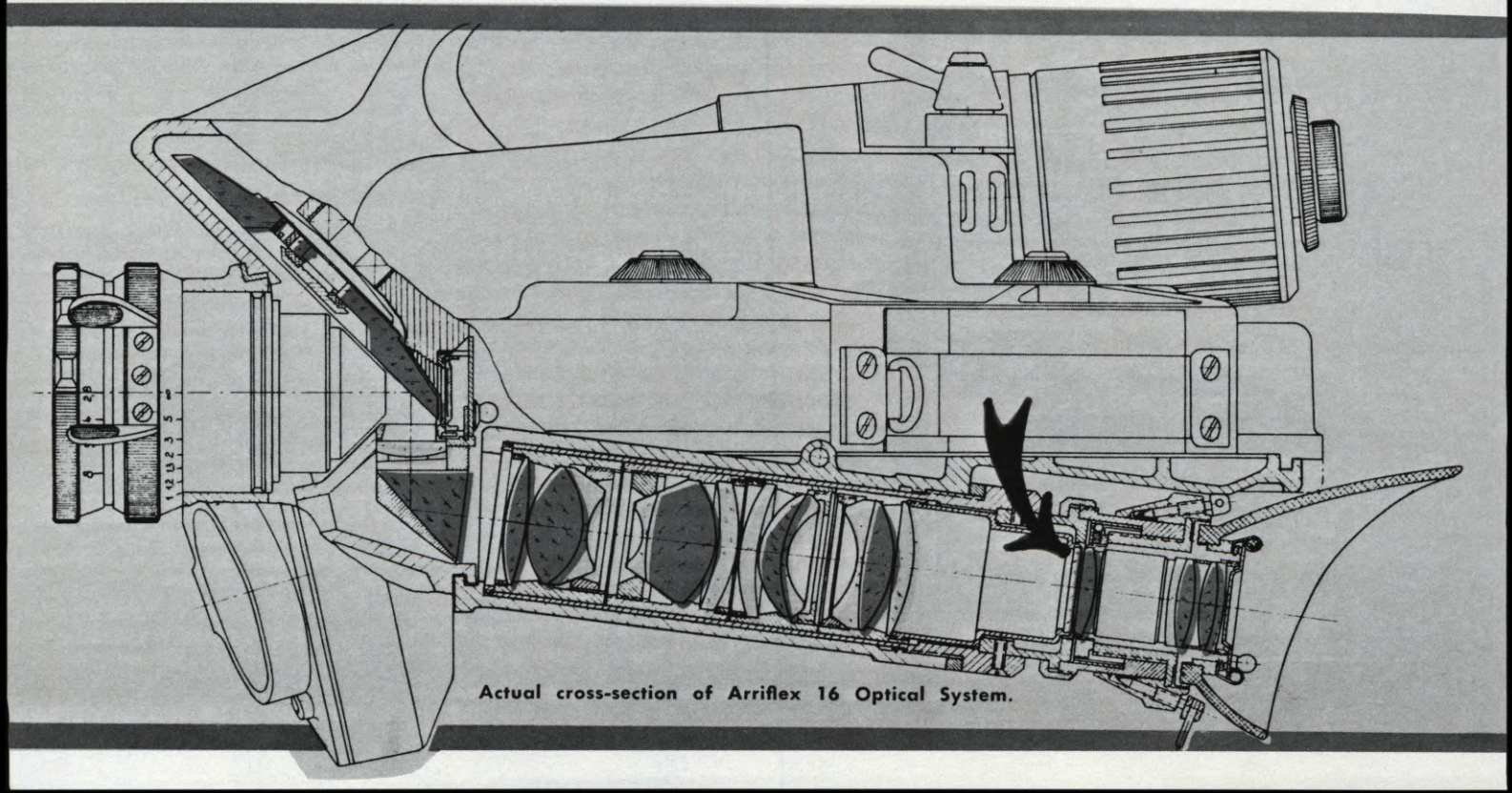
But there was a problem. Because the ground glass was so close to the film plane, some stray light from the lens could bounce off the ground glass and flash the film. Normally this "flashing" effect is kept to a minimum by making all surfaces behind the lens a "matte black" finish. However, painting the ground glass matte black would undoubtedly reduce its effectiveness for viewing. The solution was to include several matte black vertical baffles. Acting like venetian blinds, they flag the ground glass from stray light and the problem is solved. It is these baffles that account for the vertical black lines you see in the viewfinder of an Arri 35 2C.

When designing the Arri 16S and 16M, the Arri engineers decided to solve the problem in a different manner. They removed the ground glass from the front of the camera altogether and replaced it with a series of lenses. The result is that the image is reconstructed on a ground glass at the *rear* of the camera. (See Fig. I) Once again the problem is solved; no ground glass near the aperture, no reflection problem.

Now come the Arri 16BL and 16SR. Because of hand-held design considerations, the viewfinder (and ground glass) had to be located near the front of the camera. Thus, the 16S/16M solution of a rear ground glass was out. Likewise, the 35 2C solution was equally inappropriate. Because of the much smaller size of the 16mm format, the thickness of the baffles would have been objectionable and distracting in the viewfinder. For this and other reasons, the use of baffles was ruled out. As it turns out, the Arri de-

**Continued on Page 622**

**FIGURE 1—To eliminate black lines caused by baffles originally inserted to minimize "flashing" effect in viewfinder, Arriflex engineers, when designing the Arri 16S and 16M. removed the ground glass from the front of the camera and replaced it with a series of lenses. The result is that the image is reconstructed on a ground glass at the rear of the camera (note arrow).**



Actual cross-section of Arriflex 16 Optical System.

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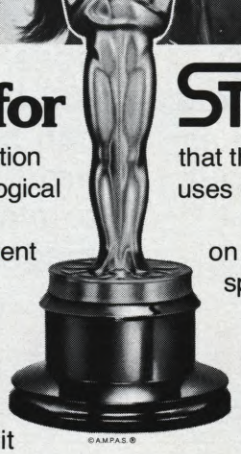


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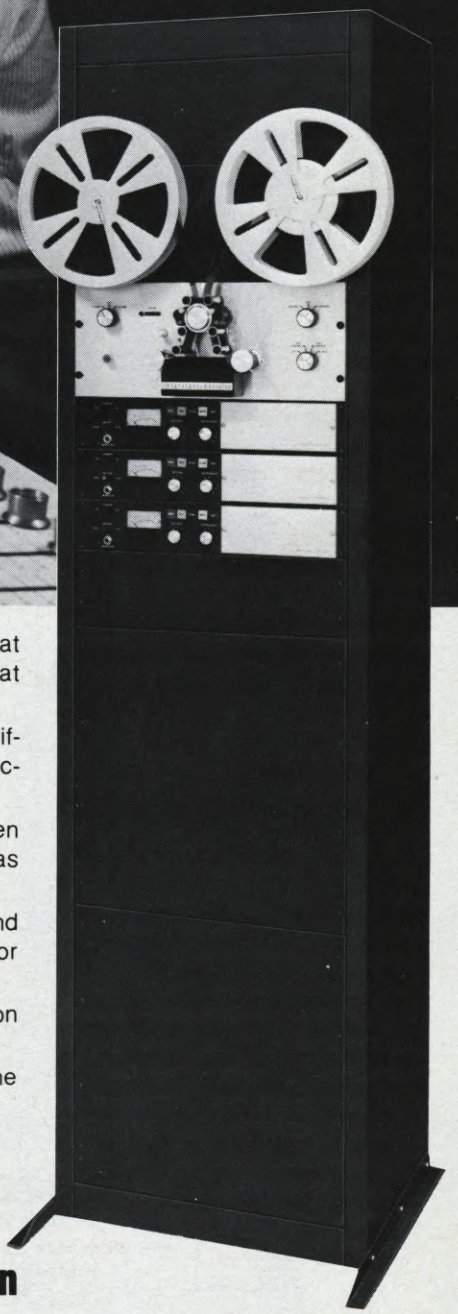

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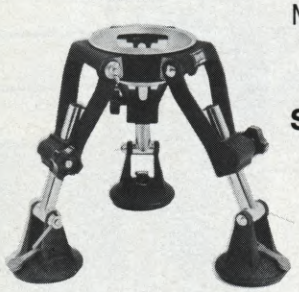

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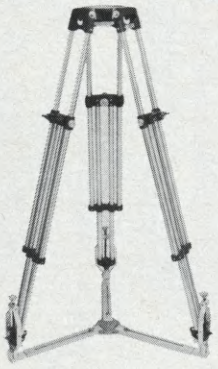

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# THE BOOKSHELF

By GEORGE L. GEORGE

**ASPECTS OF THE FILM CRAFT**

Timely and often prophetic, a 1929 overview of the future of film, then on the threshold of sound, is reflected in INTRODUCTION TO THE PHOTO-PLAY, a re-issue of a collection of 15 lectures delivered that year at USC by eminent members of the Academy, such as Irving Thalberg, William C. De Mille, Conrad Nagel and William Cameron Menzies (National Film Society, 7800 Conser Place, Shawnee-Mission. KS 66204; $13.95).

In LOS ANGELES, BIOGRAPHY OF A CITY, John and LaRee Caughey include over 100 essays on the town's evolution throughout the years. The impact of the movies on the community is duly noted in the piece, "Enter the Moviemakers" by Remi Nadeau, and in excerpts from Budd Schulberg's novel, "What Makes Sammy Run?" (U. of California Press $14.95/ 6.95).

Movie stars and other entertainers are prime examples of a current social phenomenon investigated by James Monaco in CELEBRITY: THE MEDIA AS IMAGE MAKERS. His anthology explores the basic factors that create public manifestations of celebrity cults and successfully attempts to redress the balance between life and fiction (Delta $4.95).

In THE CARRY-ON BOOK, Kenneth Eastaugh writes about the hilarious series of British comedies (*Carry On Doctor, Carry On Sergeant,* etc.) that delighted the crowds with their often risqué slapstick, puns, double-entendre jokes and other samples of "healthy vulgarity." Included are dialogue excerpts and numerous stills (David & Charles $11.95).

An appraisal of Canadian films and filmmakers, THIS IS WHERE WE CAME IN by Toronto critic Martin Knelman follows their progress and disappointments from the National Film Board's documentaries to the feature film industry that emerged from it (McClelland & Stewart $6.95).

Two volumes from the Practising Law Institute are worth noting: COUNSELING CLIENTS IN THE ENTERTAINMENT INDUSTRY deals with tax and legal as-

pects of performers' work, production partnership, employment negotiations, and the like (2 vol. $20); PRACTICING UNDER THE COPYRIGHT LAW OF 1976 explains the new rules affecting film/tv in the areas of ownership, licensing, piracy, etc. ($20).

The 7th annual survey of adult movies, Playboy's SEX IN CINEMA finds last year's crop one "in which movie companies exploited the peculiar links between sex and violence for all they were worth," according to critic Arthur Knight in his informative introduction. Equally informative are the numerous stills, color and b/w, that illustrate this appealing paperback (Playboy $2.50).

Leslie J. Wheeler's classic PRINCIPLES OF CINEMATOGRAPHY, now in its 4th edition, is an authoritative text for professionals. It provides an exhaustive survey of processes and equipment used for making and exhibiting movies (Morgan & Morgan $15.95). Tony Rose's THE COMPLETE BOOK OF MOVIE MAKING offers the non-pro extensive advice on all aspects of filming (Morgan & Morgan $7.95). In GETTING STARTED IN FILM-MAKING, tricks of the trade are concisely presented by Lillian Schiff to the younger set (Sterling $5.95).

Roderick T. Ryan, an Eastman Kodak expert, reviews in A HISTORY OF MOTION PICTURE COLOR TECHNOLOGY the medium's advances in the U.S. between 1900 and 1975. This highly technical volume, replete with data on lab processes and chemical formulae, is a must for professionals and film historians (Hastings House $49.95).

★ ★ ★

**DIRECTORS AND THE DIRECTED**

A broad gamut of essays selected by Peter Bondarella, FEDERICO FELLINI, gives the views of various critics, together with interviews with and statements by the director himself—a thorough appraisal of Fellini's favorite themes and esthetics (Oxford U. Press $4.95).

In JOHN HUSTON: MAKER OF MAGIC, Stuart M. Kaminsky focuses on the director's complex personality, his insecure youth, his conflicts with his father, actor Walter Huston, his five divorces and his uneven directorial career (Houghton Mifflin $10.95).

A revised and expanded edition of Robin Wood's classical work, HITCHCOCK'S FILMS, offers a sharply perceptive and informative analysis of the director's work in which the critic's objectivity is not distorted by his genuine admiration (Barnes $12).

In CHARLIE CHAPLIN, John McCabe has written an insightful and well researched biography, uncovering the sources of Chaplin's brilliant inventiveness and the personality factors that shook his private life (Doubleday $10).

Patricia Bosworth's MONTGOMERY CLIFT is a definitive biography of the late star, showing an intuitive appreciation of his emotional instability, relating soberly and sensitively tempestuous episodes of the gifted actor's life (Harcourt Brace Jovanovich $12.95).

Lauren Bacall, who rose from modeling to movie stardom, is portrayed with sympathy and perceptiveness by Howard Greenberger in BOGEY'S BABY, a multifaceted biography culminating in her marriage to Humphrey Bogart (St. Martin's $8.95).

Groucho Marx is a favorite subject of biographers who always manage to find new facets of his richly diversified personality. Charlotte Chandler's highly entertaining HELLO, I MUST BE GOING is a notch above its predecessors, a close association with Groucho and his friends affording her intimate recollections and original anecdotes (Doubleday $10.95).

Former actress and Hollywood columnist Adela Rogers St. Johns, in her autobiographical LOVE, LAUGHTER AND TEARS, covers some 50 years of the movie scene in this entertaining and gossipy memoir (Doubleday $10).

James Naremore's knowledgeable study, THE MAGIC WORLD OF ORSON WELLES, examines the career of the brilliant and controversial filmmaker, scriptwriter and actor. It offers an astute analysis of Welles' rebellious artistry, seeing in it a reflection of the era's political turbulence and his personality's inner contradictions (Oxford U. Press $15.95).

In MARCEL MARCEAU: MASTER OF MINE, photographs and text by Ben Martin combine in a superb evocation of the celebrated performer's artistry and technique—a fascinating analysis of his life, work and philosophy (Paddington $12.95).

*Erratum:* The publisher of DAVID HAMILTON'S BILITIS, reviewed in our March issue, is Cameragraphic Press, Ltd. (Box 1702, FDR Station, NYC 10022). ■


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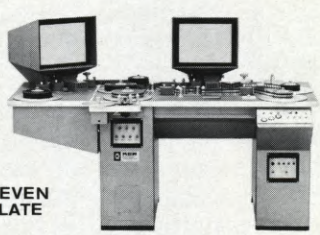


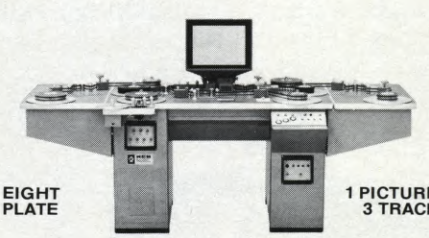


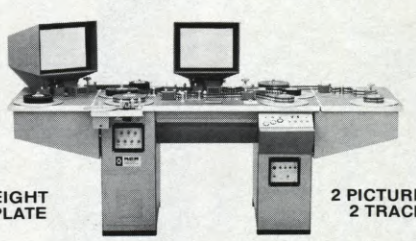


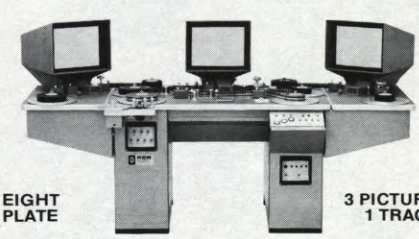


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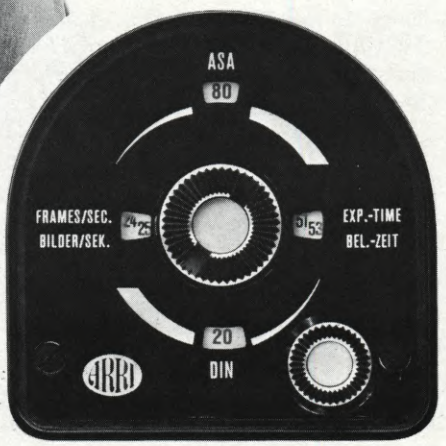


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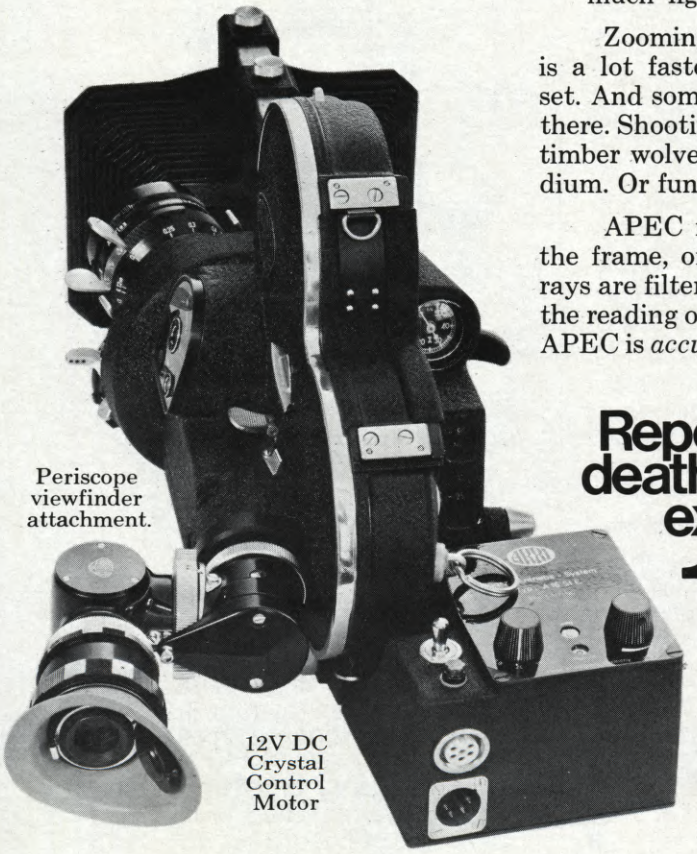

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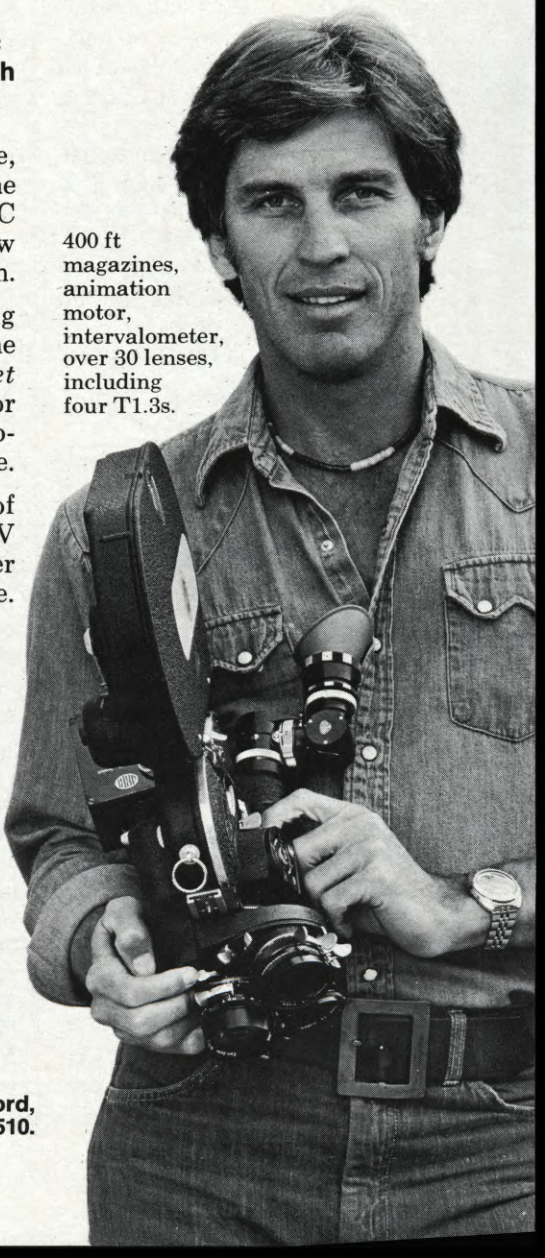

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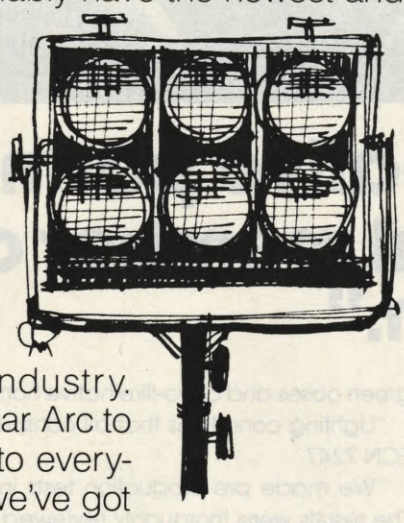

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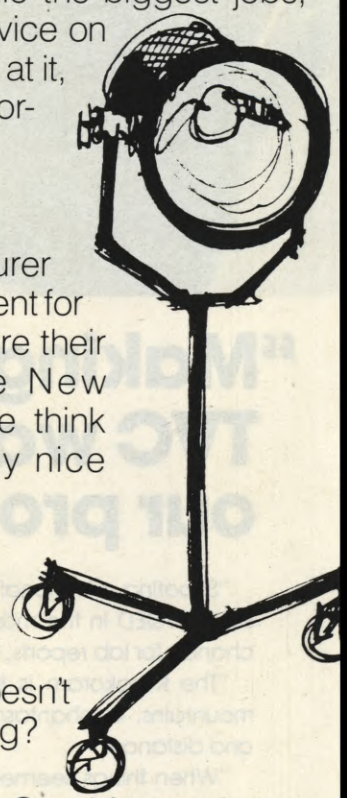

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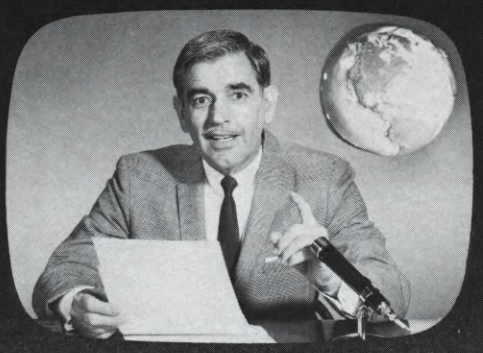

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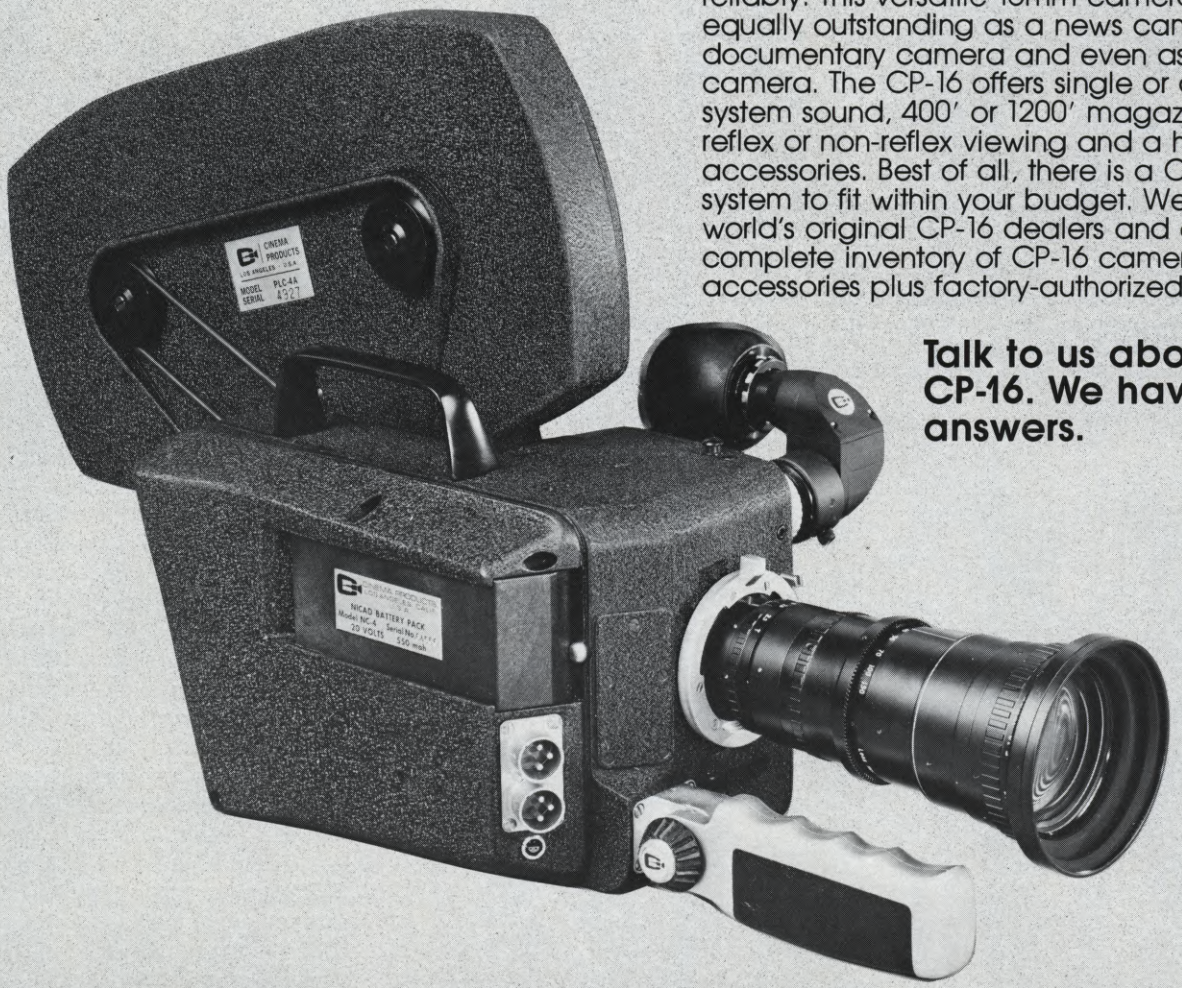


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# BEHIND THE SCENES OF "BIG WEDNESDAY"

**A cinematic paean to the surf scene of the Sixties, when the golden youth of California carved out a unique—and never to be regained—lifestyle that flourished between sand and sea**

**(ABOVE) The three young stars of "BIG WEDNESDAY", Gary Busey, Jan-Michael Vincent and William Katt, stride toward the surf for a sequence in which they regroup after years of absence to test themselves one last time in the largest surf ever to hit California beaches. Vincent and Katt have been genuine California surfers since boyhood. Busey had to learn how for the film. (BELOW) The crew on location at Cojo Point, a beautiful and undeveloped coastline area above Santa Barbara, which boasts some of the finest small waves in the world.**

The transition from adolescent to adult, the confrontive experiences that mark maturity, and the presence of a lifestyle which flows from true events, are the primary ingredients for a special film that writer-director John Milius has been saving for this precise moment.

"BIG WEDNESDAY", an A-Team Production for Warner Bros. release, is a reflective look at friendship and the social changes which occur during the 1960's. The story evolves from the Milius past, the Southern California beach atmosphere, and the personalities who symbolized surfing's renaissance. It is an accurate representation taken from over two decades of personal involvement, years that Milius spent riding waves in California at places like Malibu, and in Hawaii at Sunset Beach on Oahu's North Shore.

As one of the film industry's most prominent and gifted screenwriters, Milius' credits include "THE LIFE AND TIMES OF JUDGE ROY BEAN", "DIRTY HARRY", "MAGNUM FORCE", "JEREMIAH JOHNSON", "EVEL KNIEVEL", and "APOCALYPSE NOW". He became a director, he says, to defend his writing. "BIG WEDNESDAY" is his third film, following "DILLINGER" and the widely acclaimed "THE WIND AND THE LION", both of which he also wrote.

"BIG WEDNESDAY" is the story of three close friends who are well-known surfers sharing a lifestyle on the verge of tremendous change. The film deals directly with those pivotal moments which made the 1960's unique, particularly with respect to a system of values that are close to the core of John Milius' creative sensibilities. The script, written with friend and fellow surfer Dennis Aaberg, emphasizes the need for a code of honor, for loyalty, and for respect. It is a strong, romantic concept, which brings the film to its awesome climax, a day unlike any other, sweeping clean the time that went before.

"BIG WEDNESDAY" is a true story. The circumstances, though fictionalized, all happened, and the characters are composites of real people. It is an insight to John Milius and his pursuit of excellence that "BIG WEDNESDAY" is as accurate as it could possibly be, beginning with the initial concept and following through to the completed film.

The cast was chosen with deliberate care to reflect the essence of the surfing

**Continued on Page 581**

Filming at Cojo Point, where "small surf" sequences were shot. Scenes involving giant waves were filmed on the north shore of Oahu in Hawaii. Other locations included El Paso, Texas (doubling for Tijuana, Mexico, 1961) and various other sites in Los Angeles county. Since "BIG WEDNESDAY" was conceived, produced and acted by genuine surfers, great pains were taken to assure authenticity of the surfing styles and techniques, as well as the ambiance of beachfront California in the Sixties.

(ABOVE LEFT) Expert surfer Peter Townend skirts the slope of a wave. (RIGHT) The wave curls and crashes down just ahead of him, as he heads for the "tube". (BELOW LEFT) Actor William Katt shows his form, as he skims along the surf. (RIGHT) Actor Jan-Michael Vincent rides out a wave. Although both Katt and Vincent are both authentic and skilled surfers, discretion dictated that they be doubled by champion surfers for some of the scenes involving the giant and very dangerous waves of Hawaii's north shore.

# JOHN MILIUS "HANGS TEN" ON FILM

**Writer/director re-creates the Sixties California surfing scene and fashions an exciting movie, while nostalgically revisiting his youth**

In spite of his many triumphs in the film industry, John Milius claims that his greatest thrill in life is standing in the face of a 15-foot Sunset Beach wave.

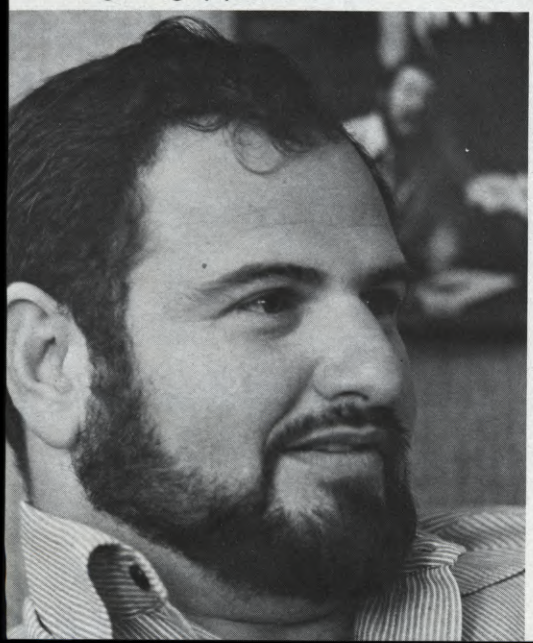
Milius first became involved in the surfing life in 1958 when he showed up at Malibu, lugging an over-sized surfboard. He earned his place in the tight-knit Malibu clique, but only after an arduous initiation. Surfers were a selective group, an aristocracy of skill, and he is proud to have been part of it. He admits that the surfing cult of those days verged on delinquency, but being a rebel was an important part of his development. The story of "BIG WEDNESDAY" is about his experience back then, his friendships and conflicts in growing up.

Milius, trained in film at USC, was a classmate and close friend to George Lucas. Together with their friends, Francis Coppola and Steven Spielberg, they form a unique community of filmmakers.

Milius is a devotee of directors John Ford, Howard Hawks and Akiro Kurosawa. Milius' style is pure old Hollywood and that's his charm. His contributions to film include "THE LIFE AND TIMES OF JUDGE ROY BEAN", "DIRTY HARRY", "MAGNUM FORCE", "JEREMIAH JOHNSON", "EVEL KNIEVEL" and "APOCALYPSE NOW". He wrote and directed "THE WIND AND THE LION" and "DILLINGER". Milius left the beach to become a filmmaker, but in his heart he's still there.

John Milius was interviewed by Greg MacGillivray, who produced the surfing sequences to "BIG WEDNESDAY".

**"BIG WEDNESDAY" co-writer/director John Milius claims that surfing was the most important influence during his growing-up period.**



**MAC GILLIVRAY: After surfing and producing surfing documentaries for fifteen years, the story of "BIG WEDNESDAY" is particularly important to me because for the first time the surfing life, the life of growing up at the beach in the early sixties, is presented truthfully in a Hollywood feature.**

*MILIUS: Surfing was the most important influence in my whole growth. To other filmmakers, film was the most important thing . . . it was the thing that turned them around, but surfing was always the most important to me. The code of values within the surfing world became a part of my view. I was just an ordinary kid with a brother who was a very good athlete and I never found a place for myself until I discovered the beach. That became my groove, my thing, my activity. We followed the swells and chased the waves and made friends. I think the friendships in surfing are so uncommonly strong because of the misery endured together. When you go surfing, most of the time is miserable. You drive in a car for three or four hours telling stories and discover the surf crummy and the water cold. You get back in the car and try and find a place where you can get five tacos for a dollar. Then you try and find a place to throw up. And that's what most surfing trips are. In between are the exhilarating times when you meet some girls and the frightening times when the waves get big and you almost drown. So the surfing life is really an extension of your youth and discovering the camaraderie of friends.*

**MAC GILLIVRAY: Where did you grow up?**

*MILIUS: Here in Malibu. I didn't know what I was going to do in life. When I first went to the Islands, at that very impressionable age when you are asking yourself a lot of questions, eighteen or nineteen, I walked into a Japanese movie theatre and they had a week of Kurosawa films. I became totally enmeshed in them, enthralled and said this is it. This is for me. This is what I want to do. I never knew movies could really be like that. I want to make movies that are like that.*

**MAC GILLIVRAY: One thing that's interesting about "BIG WEDNESDAY" and all the films that you've written is the attention to detail. If a character shoots a gun, you have the proper kick to that particular gun. The same is true with the surfboards in this film—the correct surfboards for the particular waves and periods.**

*MILIUS: That adds so much to a movie. The saddles and horsemanship in a western have to be just right. In "THE WIND AND THE LION" we used eight different rifle types. You probably could have used one type and gotten away with it, but if you are attending to details like a gun or a surfboard or a saddle, then you are attending to details everywhere: in performance, in language, in framing and color. It's part of the way I direct actors. I like to put them into a detailed and accurate atmosphere where you feel reality. In addition, the attention to detail creates its own mythology. The gun in "DIRTY HARRY", the 44 magnum, becomes part of the myth. If Dirty Harry pulled out a little 38 or pulled out a big 45, it wouldn't be his character. It's THAT gun, and the attention to the detail of that gun becomes the mythology of that character. In surfing, the mythology is created by people who talk about a great cutback and a good nose ride. Soon the audience understands and absorbs the meaning and importance of a nose ride or cutback and gradually those things become part of the mythology. In "STAR WARS" the characters are constantly talking about the droids, and it takes a while before the audience realizes that the droids are robots. With "BIG WEDNESDAY", I never tried to explain surfing terminology but to let people live it . . . to become part of it.*

**MAC GILLIVRAY: Yes. You have to give the audience more responsibility, more credit for intelligence. Besides Kurosawa, who are your writing or filmmaking idols?**

*MILIUS: Melville is my writing idol. Kurosawa, Ford, Hawks and Lean are my favorite directors.*

**MAC GILLIVRAY: How did you sell "BIG WEDNESDAY" to Warner Bros? Do you have any funny anecdotes about your sales approach, selling them a film that from their point of view appears to be a beach party movie?**

*MILIUS: Well they wanted the beach aspect for the kids. I don't think they really*

*cared much what the movie was going to be about as long as there were enough kids doing things and girls and surfing and a little bit of sex and a little violence. They liked my movies and they wanted me to do a film for them so it was an opportune time to slip this one in—sneak one by them.*

**MAC GILLIVRAY: How do you sell a film ordinarily?**

*MILIUS: You just tell the story. And if you are good at telling the story and they like you, then they do it. I have a lot more clout now which makes it easier, but even when I didn't have the clout I was always a good storyteller. I suppose that comes from surfing. Sitting in those cars all those years telling stories on the way to and from surfing spots.*

**MAC GILLIVRAY: When you did sell it to Warner Bros., what kind of control over creativity were you given?**

*MILIUS: This was a wonderful situation. In Hollywood I am the resident champion surfer and no one knows anything about surfing, so they left me alone. I don't think the studio executives bother filmmakers the way they used to because they don't last very long. They last an average of about two years at their jobs and filmmakers tend to last a lot longer. When Jack Warner saw a movie, he said, "This is the kind of movie we make here and this is the way it's going to be." Today's studio executives are more concerned with controlling the deals than controlling the movies.*

**MAC GILLIVRAY: The casting of actors in "BIG WEDNESDAY" is flawless and the performances given by these actors is uniformly excellent. Can you describe your casting methods?**

*MILIUS: Having grown up with real surfers, being a surfer, I knew precisely what I wanted from each role. There is a certain aura that we came to call being "indigenous to the beach" that we had to find in every actor. Amazingly, we found it in Gary Busey, who is from Oklahoma, while many Californians we tested lacked this quality. They were flake-o actors, whereas Gary Busey was the authentic character. Sam Melville, who never surfed, is somehow indigenous to the beach. It took a tremendously long time to find the right people. Jan-Michael Vincent and William Katt both surfed all their lives and were perfect.*

**MAC GILLIVRAY: How did you come to Jan-Michael . . . how did you discover that he was a surfer?**

*MILIUS: I saw him at the beach one day and we went surfing. He seemed like a logical choice.*

**MAC GILLIVRAY: It makes so much more sense that you met at the beach and not in a casting room. Casting in the natural elements. How can you contrast directing with writing?**

*MILIUS: Writing is the pure thing. When you write, you see the movie perfectly—the parts are played perfectly, the background is right, and, in the case of "BIG WEDNESDAY", the waves are perfect. Then it's a question of going out and trying to put that on film, and get it as close to that first* **vision** *as you can. Writing is a truly creative function, while directing is partly creative and partly a matter of logistical expertise. I am a great student of the gun-making art and the similarities are interesting. First, the gunmaker designs the flow of the line, the grace of the gun and the detail of the engraving. Then he molds the wood and the metal with little files. Finally, after a lot of handwork he's made a magnificent gun. That's exactly the way making a film is. I approach directing more as an artisan than an artist.*

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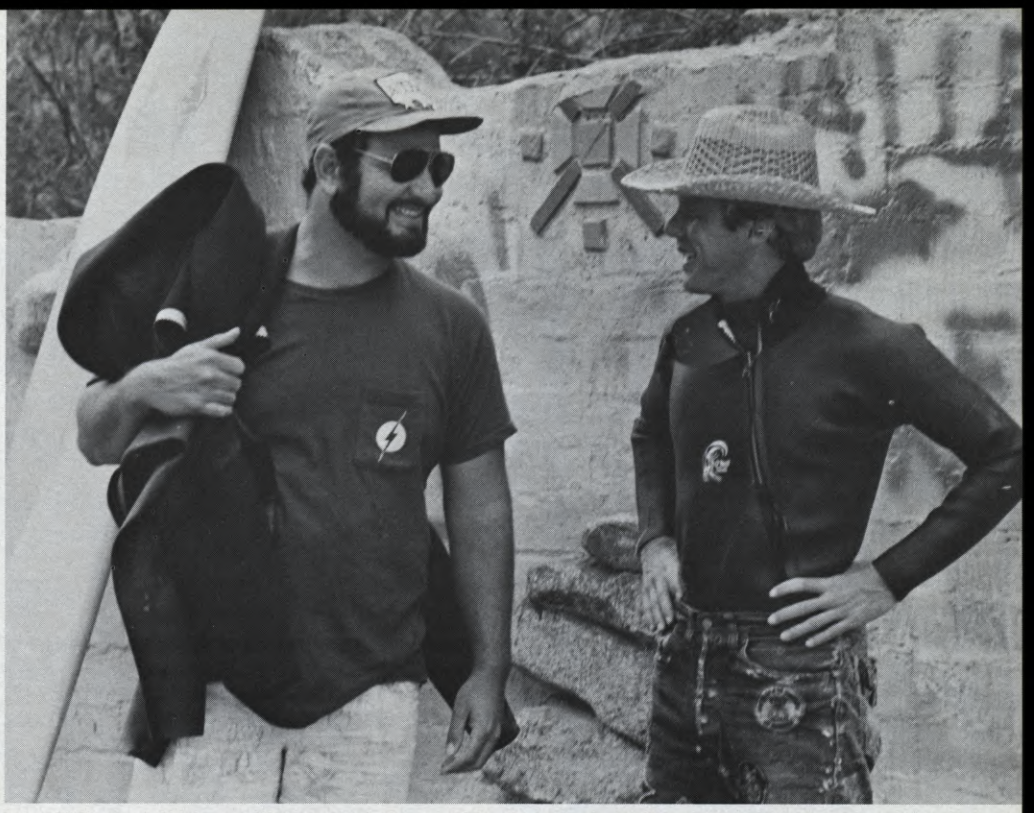

**John Milius reminisces with Dennis Aaberg, with whom he co-authored the original screenplay. Asked about this—his first collaboration—Milius says: "Since 'BIG WEDNESDAY' is a story about friendship, it was natural for two surfing friends to write the script . . . We had experienced the same time and place, which made for a truthful and warm feeling in the script."**

**As if to prove he hadn't lost his "hang ten" touch, Milius performs an "arched back" turn on a wave during Hawaiian location shooting. He grew up in Malibu Beach, where surfing, during the Sixties, was a total way of life for California youth. Its code of values became an important element in his overview of life.**

# THE WATER PHOTOGRAPHY IN "BIG WEDNESDAY"

**Filming in waves up to 20 feet high is a dangerous pursuit, but intrepid water cameramen, expert surfers themselves, risked the wrath of the sea to "show it like it is" in the surfing scene**

**By GREG MacGILLIVRAY**
*Producer of the Surfing Sequences*

Hawaii. Looking to shore, dark threatening clouds hang low over the land, showering the green hills of Sunset Beach. A double rainbow magically arches across the darkness. I paddle my surfboard away from this dramatic background through the rip which runs like a turbulent river out to some of the largest waves in the world. The water surface is choppy, slowing my progress through the waves. At a distance, I can see Lopez and Cairns and Hamilton dropping into walls of water 15 feet high. On the nose of my surfboard is a 40-pound waterproofed high-speed Arriflex camera; beside me on surfboards are Jan-Michael Vincent, William Katt and Gary Busey. We have come to photograph "BIG WEDNESDAY".

*"A day will come that is like no other—a day that is so big—so grand an event in nature that it cleans everything that went before it. And nothing that ever happens after will ever be the same."*

There's an old legend in the surfing world that the biggest surf comes on Wednesdays. Unbelievably, today *is* Wednesday and the surf is enormous and dangerous. Yesterday, a champion surfer, Jeff Crawford, wiped out on a ten-foot wave and surfaced with a gash in his head requiring 200 stitches. This morning a loose surfboard speared a paddling surfer in the groin, nearly destroying his sex life—he'll be hospitalized for months. As we paddle into the surf line-up area, these thoughts are charging through our minds. The waves are 20 feet and they're dangerous.

Outside we link up with John Milius, the director, and the other water cameramen, George Greenough and Dan Merkel. As we discuss the shooting plan, a large set of waves looms outside. George is the first to spot the emergency: "Let's move outside, fast!" Suddenly the swells jump up even higher, and we all realize we're in trouble. *Panic!* Paddling as fast as our arms will power us is not fast enough—there is no way to get beyond the waves. The first one breaks in a thundering roar ahead of us and we fan out to avoid each others' boards and cameras. I release my camera into the water, paddle a few strokes further, then dive off swimming deeper and deeper to avoid the concussion of the wave. Suddenly the water goes black and I am tossed around helplessly by the turbulence of the 15-footer. There is no point in fighting it, so I stay calm and don't panic.

**Continued on Page 578**

(LEFT) Producer of the surfing sequences for "BIG WEDNESDAY" Greg MacGillivray, Co-writer/director John Milius and producer Buzz Feitshans relax during a rare lull in production. (RIGHT) MacGillivray films Gerry Lopez and Jan-Michael Vincent in the surf zone. (OPPOSITE PAGE) Expert surfer Peter Townend doubles for William Katt in the curl of the wave.

(LEFT) Filming from the Boston whaler boat at Cojo Point, with the Tyler mount designed to absorb rough shock and bounce. (RIGHT) Greg MacGillivray films Jan-Michael Vincent from surfboard low angle, while sound crew and John Milius watch.

(ABOVE LEFT) Water cinematographer Dan Merkel readies his camera to shoot a scene. (RIGHT) Preparing the surfboard for "water-proofed sound". (BELOW LEFT) MacGillivray and Milius with 1000mm lens. (RIGHT) "Dollying camera" shots of surfers were done by MacGillivray and surfboard-mounted Arriflex camera with 35mm lens.

# SHOOTING THE TUBE WITH GUM AND CAMERA

**A master surfer, yacht and surfboard designer, builder of cameras, and inspired filmmaker talks about his work on "BIG WEDNESDAY"**

Ever since the early Sixties, when surfing became an Olympian lifestyle for the golden young gods of the California sands, George Greenough has endured as a kind of living legend in that special world. Throughout the globe, wherever young adventurers pit their bodies and skills against the giant waves, he is still considered the "surfer's surfer".

But he is much more than that. The gum-chewing, invariably barefoot Greenough (now in his mid-thirties, but still boyish in appearance and manner) is a world-renowned designer of surfboards that have revolutionized the sport. He pioneered the use of the under-five-foot, spoon-shaped knee-board on which he can race like a demon up and down the curl of a towering wave.

He is also a highly skilled designer of yachts, a builder of exotic waterproof motion picture cameras, and a highly-respected filmmaker who, in his first film, "THE INNERMOST LIMITS OF PURE FUN", did what no filmmaker had ever done before—he rode inside the tunnel of the hollow wave with a motion picture camera strapped on his body to record images that only an expert surfer in the tube of the Banzai Pipeline ever sees.

Since then, he has divided his time between surfboard design and making films the likes of which, for pure visual excitement, are never seen elsewhere on the screen.

**George Greenough got turned on to film with his first surfing feature, "THE INNERMOST LIMITS OF PURE FUN". He's still making them.**

It was inevitable that his expertise should be called upon to aid in the filming of "BIG WEDNESDAY"—and he lent the project his considerable talents in two different ways: he designed and built several super-sophisticated waterproof 35mm cameras specially to suit the demands of the picture, and he filmed spectacular scenes of what early-on had become his way of life—surfing.

In the following interview for *American Cinematographer,* conducted by Greg Hugland, he talks about his dual role in the filming of "BIG WEDNESDAY":

**QUESTION: How did you first get involved in shooting the water scenes for "BIG WEDNESDAY"?**

*GREENOUGH: I had made a film previously called "THE INNERMOST LIMITS OF PURE FUN", which intercut point-of-view shots from the water with shots taken from the beach. John Milius had seen this film and had always liked it, so when he and Denny Aaberg were first starting on the script, he asked me about shooting some of the water scenes. Right after that I left the States to sail across to the South Seas, but I was in communication with my parents and they said that the picture was definitely going to be made. So I returned. They were still in the script-writing stage, but I started to search around for the camera equipment I would need. I located three small instrumentation cameras that were based on Eyemos, and I did an extensive amount of work on them. I took the cameras apart and disregarded the housings they were in. I built each one of them into a light-tight, waterproof camera, similar to a Nikonis. The problem with any filming equipment—but especially 35mm equipment—is that when you are carrying it on a surfboard, the weight is critical. So I didn't want a camera inside a waterproof housing; I wanted a waterproof camera. Originally "BIG WEDNESDAY" was going to be shot in the 1.85 format, and so the cameras were designed to use spherical lenses. Each camera, with a 14.5mm or 18mm lens mounted, weighed about 10 lbs. With the 9.8mm lens it was a little heavier—about 13 lbs. These cameras were electrically driven and would run from about 20 to 80 frames per second. When the decision was made to change to the Panavision anamorphic format, I had to build adaptors for these cameras so that they would accept the much larger lenses. But all of the point-of-view shots I made for "BIG WEDNESDAY" were filmed with these cameras using spherical lenses and later converted to anamorphic.*

**QUESTION: Where did you carry the camera on you when you were surfing?**

*GREENOUGH: I mounted the camera either on my back, so that it would look over my shoulder, or on the front of the board, so that it would look over the front of the board. I had about six fronts made at Warner Bros. that matched the boards that the actors used. These were only about a foot long and I could fasten one onto my board and mount the camera just behind it to provide a point of reference.*

**QUESTION: So you could see the front of the surfboard on the bottom part of the frame. How wide were the lenses that you used?**

*GREENOUGH: I used a 14.5mm and a 9.8mm.*

**QUESTION: Did you experience much distortion with the really wide lenses?**

*GREENOUGH: There isn't any barrel distortion in either the 9.8mm or the 14.5mm.*

**QUESTION: How about inside a breaking wave, which is round? Did the lenses vignette?**

*GREENOUGH: No, these lenses wouldn't. I was shooting Academy aperture and, in that frame, the 14.5mm would vignette some, but they would just use the center part of the image. The 9.8mm lens would actually cover the whole frame.*

**QUESTION: How wide do you think it was at the widest point?**

*GREENOUGH: About 120 degrees.*

**QUESTION: Specifically what kinds of shots did John Milius want you to get?**

*GREENOUGH: Well, he wanted a fair amount of point-of-view shots—which is what these cameras were designed for. And he also wanted me to film a lot of shots of other surfers. The main reason that I built three cameras was the limited*

*film load of the Eyemo. It holds only 100 feet—which goes through pretty fast when you're filming at 50 frames. So the idea was that I would have an assistant on the beach loading and a lifeguard swimming cameras in and out to me, so that I wouldn't have to go in. In that way, I could keep three cameras in constant motion—one being loaded, one in transit, and one that I would be shooting.*

**QUESTION: How did that plan work out?**

*GREENOUGH: When I was shooting some of the point-of-view stuff, I had a quick-release mount on my backpack and it took only a few seconds to change cameras. That worked very well, once we got it organized.*

**QUESTION: Would that allow for just the back of your head to be in the frame?**

*GREENOUGH: No part of me was ever framed in the picture. It was purely just the inside of a breaking wave—looking out. On some shots I followed other surfers, but did basically the same thing.*

**QUESTION: What are you riding when you are carrying this camera? Are you standing up or on your stomach?**

*GREENOUGH: No, I'm riding on my knees on a small board, which is a little under five feet long—or I use an air mattress to lie on. The air mattress is good because it puts the camera down very low, whereas the board puts the camera up a bit higher. Another advantage of the air mattress is that it's soft, which means that if you run over other surfers it's not going to do them any harm.*

**QUESTION: How big were the waves that you rode inside of to get the shots for "BIG WEDNESDAY"?**

*GREENOUGH: About four to ten feet.*

**QUESTION: A four-foot wave? How do you think that is going to look in the wide-screen format?**

*GREENOUGH: Well, a lot of the surfing sequences were done in small surf and these scenes intercut fine in that size surf. The big surf sequences required using larger waves, but my problem was that I didn't get much opportunity to shoot in the larger surf. However, I made a picture about four years ago called "ECHOES" and we've taken the large waves out of that film and blown them up. These scenes were filmed in 16mm with a high-speed camera running at about 200 frames per second. The lens from Century was a 3.5mm covering about 165 degrees. I shot the large waves right back inside the barrel.*

**Among the first filming rigs that Greenough designed was this 35 pounds of gear, which included an over-the-shoulder camera mount, fibreglas camera housing, portable twin quartz lights and battery packs for both the high-speed 16mm camera and lights. He used this rig, strapped on his back, to film while shooting through the hollow waves, recording images never before seen on the screen.**

**QUESTION: There are a lot of other shots in "BIG WEDNESDAY" where you used a telephoto lens and sat out in the water following surfers. How did you progress from a small impact film camera to a camera that had a reflex finder system and the capability of follow-focus?**

*GREENOUGH: On the small camera—when I used the Panavision lenses—I could use up to a 200mm lens, and I had to follow-focus by guess, which isn't really good to do, particularly on a picture like this. So I told John that we should get a reflex camera to shoot in the*

**Continued on Page 590**

**Greenough discusses surfboard mounting of camera with Greg MacGillivray, producer of the surfing sequences for "BIG WEDNESDAY". The camera shown here is a modified Eyemo instrumentation camera. It holds 100 feet of 35mm film and is board-mounted to film the face or feet of a surfer in action. A trigger on the rail of the surfboard turns it on and off.**

*Scene from Columbia Pictures production of "Close Encounters of the Third Kind."*
*Copyright 1977 Columbia Pictures Industries, Inc.,*
*Steven Spielberg, Director. A Columbia Pictures Release.*

*"When you're dealing with such high heat, you must have a color medium that will hold up, and my experience is that Roscolux will do just that."* —Vilmos Zsigmond, A.S.C.

*Vilmos Zsigmond, A.S.C., Academy Award Winning Director of Photography*

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# PHOTOGRAPHING "INTERNATIONAL VELVET"

**Almost thirty-five years after the now-classic "NATIONAL VELVET" was filmed comes the ambitious sequel—and with it a whole new series of interesting photographic challenges**

In 1944 a dark-haired young girl with startling violet eyes began work on her second film for MGM. On its completion the world confirmed the 12-year-old youngster's claim to stardom and the film—based on a best selling novel by Enid Bagnold—went into the history books as one of the screen's all-time classics. The film was "NATIONAL VELVET", the girl Elizabeth Taylor.

"INTERNATIONAL VELVET" is MGM's sequel to "NATIONAL VELVET" and, taking some of the characters from the Bagnold book, director-producer-writer Bryan Forbes has crafted an entirely new story centered on Sarah Brown, an orphaned American girl with a love of horses. Sarah comes to England to live with her aunt Velvet, the character portrayed as a youngster in the earlier film by Miss Taylor.

Where Velvet's ambition had been to win the Grand National, Sarah sets her sights on the Olympic Games and a Gold Medal in the Equestrian Three Day Event.

Sarah Brown is portrayed by Tatum O'Neal, the 14-year-old actress who started creating her own legends at the age of nine. "INTERNATIONAL VELVET" sees her making the six-year transition from uncertain teenager with braces on her teeth to the poised young horsewoman taking her place in the British Olympic Team.

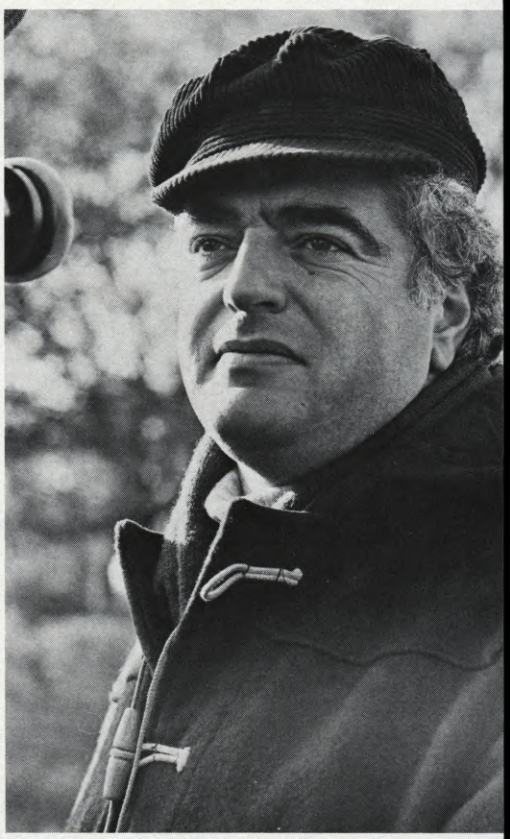
Christopher Plummer, star of such films as "THE SOUND OF MUSIC" and "THE MAN WHO WOULD BE KING", appears as Velvet's friend John Seaton, a writer who plays a large part in helping young Sarah realize her dream to ride for England.

Welsh-born Anthony Hopkins is Captain Johnson, coach to the British Equestrian Team.

Nanette Newman portrays Velvet Brown with her memories in England's West Country. She has a pivotal role in the story.

Filming of "INTERNATIONAL VELVET" began September 1, 1977 and the opening scenes, shot in Devon, show a landscape of unparalleled beauty, as the camera pulls back to reveal deep green sea, miles of sandy coves, green hills and fields of magnificent richness. It is this breathtaking vista, one of the last unspoiled areas in England, that director Forbes has exploited to startling effect.

Most of the scenes of Tatum O'Neal as the young Sarah, seeing the foal for the first time, then exercising her horse, and Nanette Newman as Velvet, remembering times past, were filmed there, in and around the tiny village of Mothecombe. A part of the Mildmay Estate, one of the last bastions of feudal England, it is unmarked on any but the most detailed map. Anthony Mildmay-White, who owns the estate, loaned the film-makers Efford House as the home of John and Velvet. Some three hundred years old, the house sits high above the River Yealm in wooded splendor. Not as grand as the Mildmay-White house with its collection of Canalettos, Efford House exists on its own charm.



**"INTERNATIONAL VELVET" Director of Photography, Tony Imi, BSC, found the challenges different from those of previous assignment, "THE SLIPPER AND THE ROSE".**

**Cast, crew and camera crane for MGM's "INTERNATIONAL VELVET" prepare to shoot the Olympic Games cross-country Three-Day Event sequences at Burghley, Stamford, home of the Marquess of Exeter, which has a permanent Three-Day Event course set in the home park. Various other locations in England and one in America (Ledyard, Mass.) were used in the filming.**

Cast and crew were headquartered at nearby Plymouth and looking at the city and surrounding countryside it is difficult to believe anyone would want to leave. But leave they did. On September 6, 1620 the Pilgrim Fathers set sail from the port to start a new life in a new world. Today more than a million Americans claim ancestry from the fifty original settlers and the place from where the Mayflower sailed is marked with special plaques. Plymouth has always been a naval base and in 1588 one of its most famous sailors, Sir Francis Drake, finished a game of bowls on the Hoe before defeating the Spanish Armada. Devonport, on the city's western side, is one of the

Royal Navy's home ports.

The full panorama of the Olympic cross country was filmed at Burghley, Stamford, home of the Marquess of Exeter, himself an Olympic gold medallist in 1928 as a hurdler. Burghley has a permanent Three-Day Event course set in the home park. Built in the mid-sixteenth century, the palace, one of England's most important examples of Tudor architecture, provides an impressive backdrop for the film. In the week prior to filming, Burghley had been the scene of the European Championships and several of the formidable fences were used in sequences for "International Velvet".

Dressage and show jumping were filmed at Arena North, Charnock Richard. On the edge of the industrial north, Arena North lies in a natural hollow with its own particular beauty. Top showjumping competitions are held there, regularly attracting world class riders.

On the move for most of its sixteen-week schedule, the production also filmed on the campus of Birmingham University which was dressed to give the Olympic Village background. Windsor Great Park, bordering Windsor Castle, weekend home of the Queen, became the location for the Junior Horse Trials and Ribblesdale Park, Ascot, played itself, the training headquarters of the British Equestrian team.

Ledyard, Mass., where Bryan Forbes, Tatum O'Neal, Anthony Hopkins and key technical crew joined American personnel for three days' filming of America's foremost Three-Day Event, also appears. Continual rain and gale force winds did little to help things go smoothly but the production's fleeting visit was judged a success in film value.

Further scenes showing Velvet's Grand National winner, Pie, making a lap of honor, were filmed at the Olympia Stadium in west London.

The production, including the highly complex Olympic Village and stadium scenes staged at Birmingham and Chorley, near Manchester, was designed by Keith Wilson, the young British art director whose work has been seen to spectacular advantage in the science-fiction television series "SPACE 1999".

"INTERNATIONAL VELVET" was photographed by Tony Imi, BSC. This is the third time he has worked with Bryan Forbes—he previously lit "THE RAGING MOON" and "THE SLIPPER AND THE ROSE". His other credits include Nureyev's "I AM A DANCER" and he covered the swimming events for the official film of the 1968 Olympic Games in Mexico. On television he was responsible for the photography of such presentations as the BBC's "UP THE JUNCTION", "CATHY COME HOME" and the "EDWARD VII" series.

**Director-producer-writer Bryan Forbes gives instructions to young American Academy Award-winning actress Tatum O'Neal, who worked hard to become a champion-class horsewoman for the role. Inspired by the success of "NATIONAL VELVET" three-and-a-half decades ago, Forbes crafted an entirely new story centered on the original Velvet's orphaned American niece.**

The following interview for *American Cinematographer* was conducted in Munich, where Imi is presently photographing MGM's "BRASS TARGET", starring Sophia Loren and John Cassavetes, for director John Hough:

**QUESTION: Did you make a point of seeing "NATIONAL VELVET" before starting "INTERNATIONAL VELVET"?**

*IMI: No. I made a point of not seeing it. "NATIONAL VELVET" is a horse film which has become a sacred cow, forgive the expression, and following in the footsteps of a classic like that I didn't want to be overawed. I felt that "INTERNATIONAL VELVET" would have to be a film that would stand on its own four legs. Oddly enough, I did see "NATIONAL VELVET" on television on Christmas Day, three days after we had finished shooting. I think we have honoured its memory.*

**QUESTION: This is the third film you have done with Bryan Forbes. Do you work instinctively together or did you work out a "look" for the picture before it started?**

*IMI: Not really a look. True, there is a sort of fairy tale element to our story—a young girl realising her impossible dream, etc. And we did take pains to backlight the more romantic elements of the story: Nanette walking on the beach in Devon, Tatum seeing the foal for the first time, that sort of thing, where a little extra magic was demanded. But for the most part "INTERNATIONAL VELVET" has a gritty "ROCKY" type reality, real international thoroughbreds, with real international riders in brutally competitive situations, where anything can happen. Ninety-five percent of the picture was shot on location. We started shooting in glorious late summer in Devon but we knew from then on we could expect the worst sort of weather. So our main concern was to be loaded for bear, ready for every eventuality—and every eventuality is what we found.*

**QUESTION: To help the illusion of seeing Tatum O'Neal age from 12-year-old to 18-year-old, Bryan Forbes uses the very effective device of telling his story against all four seasons of the year. Did this pose problems for you?**

*IMI: Yes. There were great problems shooting on location, especially on the short days we used to get at the end of the year. We would start off in sunshine and by mid-afternoon there would be great winter clouds scudding across the sky. But we were committed to one*

**Continued on Page 586**

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DECEMBER 1977

American Cinematographer

International Journal of Motion Picture Photography and Production Techniques

# Interview With ROBERT SURTEES

Working in a variety of actual locations and a few studio sets, Surtees displayed great versatility in achieving a blend of realism and high visual lowing interview for *Am tographer*, he discuss challenges and satisfact his photography of "T POINT".

**QUESTION: How woul the photographic styl shooting "THE TURNI**

*SURTEES: There was t make everything supe cause so many painters in rendering ballet su didn't want anything to and we certainly didn't w it had been shot in a stu the photography was emotion that went with that the figures on sta speak, to tell you some movements. We want something seductive tha audience emotionally in one of the most beau human body can expre right.*

**QUESTION: In "THE certain ballet sequen trayed visually in a realistic manner. For was a certain amount o with camera speeds, s certain leaps, and tha Did you do any of that in "THE TURNING POINT"?**

*SURTEES: No, we didn't go in for any spectacular speeding up of the cameras or anything like that. It would have been easy enough to shoot in slow-motion, but these dancers were so good that make it really look like ballet would be to use the actual ballet lighting. However, the main difficulty there was in deciding whether there would be enough light for exposure in color—or too much, because there's no way to adjust regular theatrical lights. They hang on rails up above and you can't flood them out or ghter or dimmer. The t that way. They're like s mounted in units that ant to protect them n iron bars that have to hange bulbs and then There must be 100 to g at all times, but even r away that you usually gh light for cinematog- though all of the lights mmers, you can't dim hat would change the re—something else to*

**QUESTION: Did you have to force-develop any of the footage?**

*SURTEES: From time to time, when I'd get a bit worried, I'd send some stuff to be pushed. One day we got a call from the lab telling us that in one scene, when the head dancer went to the back of the set (where there was a building as part of the scenery), he just disappeared. You couldn't see him at all. We were going to retake the scene, but first I called Otto Paoloni, who is the head of the Technicolor lab in New York (and just about the best lab man in the world), and had him take a look at it. To further complicate matters, I had a fog effect in the scene and the fog completely covered the dancer. Anyway, Otto took the film and pushed the hell out of it in the printing. He kept going as far as he could go, and it turned out to be one of the best shots in the picture. There's not a bit of fog and the dancer's completely in the clear back there. I've never met another lab man like Otto. Night and day he's right in there watching over your footage.*

**w did you work your se problems?**

*ok the time to lower the em, instead of flooding u do in a movie studio. some of the difficulties r as I know, this was the lighting had been con- on picture lighting, we scratch, because origi- intended to do it that anned to set it all up on Hollywood, but when I with Herb Ross about I realized that wouldn't have had to use many rallels and they would shot half the time. The only other alternative was to shoot with the stage lighting and let the lights get into the shot now and then—which would seem natural in the theater. For the major part of a number we would be tilted*

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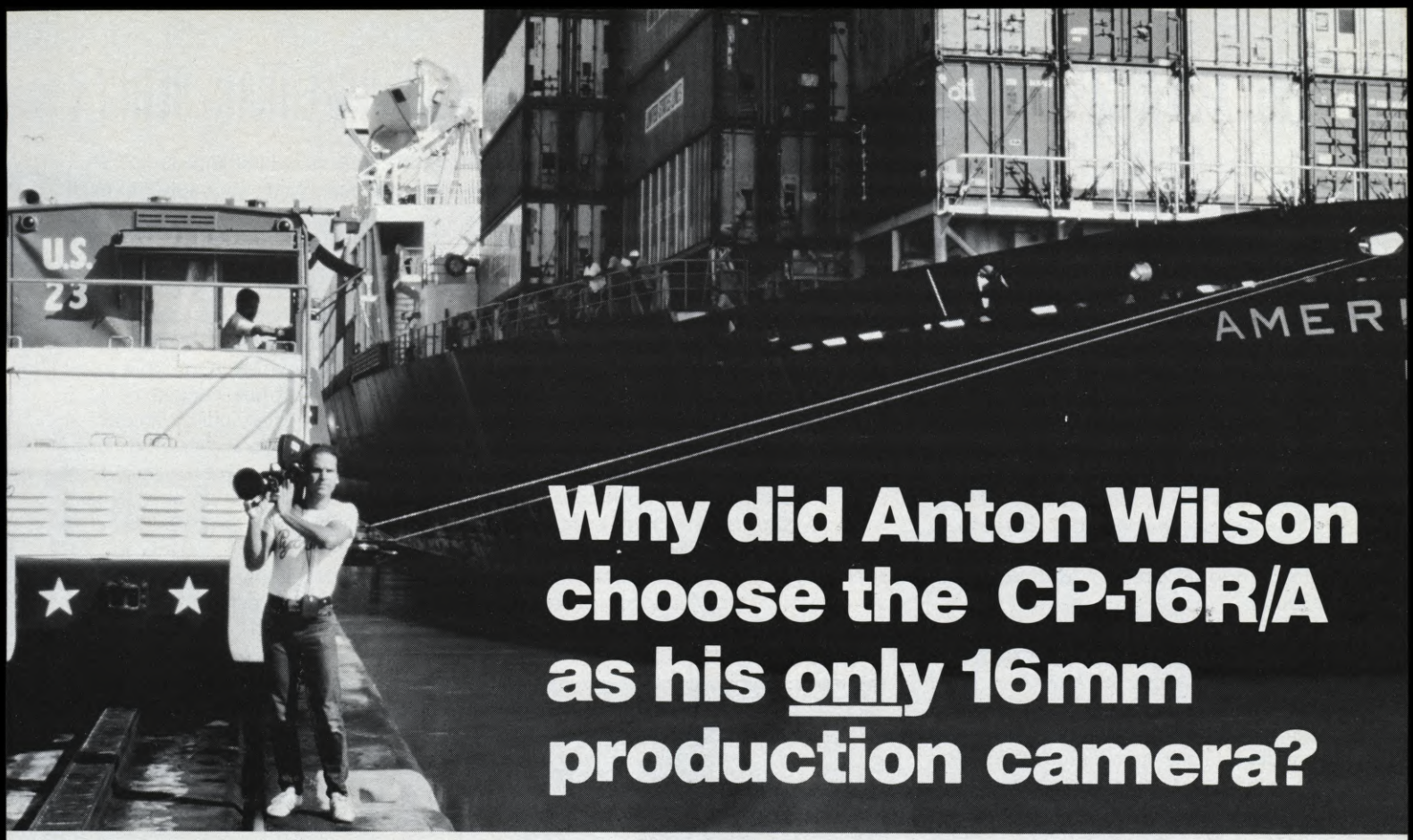


# Why did Anton Wilson choose the CP-16R/A as his only 16mm production camera?

Known for his daring and inventive camera work, independent producer/cinematographer Anton Wilson has done it all: documentaries, special feature stories for television, industrials ... most notably for ABC-TV's *Good Morning, America* and for industrial giants like AT&T, among others.

A former technical director for Arriflex, with a background in mechanical engineering, Wilson is also an authority on motion picture production techniques and equipment design. He is vice-president of Anton-Bauer, manufacturers of power supplies for film and video use, and a contributing editor to the *American Cinematographer* magazine.

## "The quietest 16mm camera I've ever owned."

"I first started out with an Arri 16BL, followed by an Eclair ACL," says Wilson. "Eventually I gave them both up. For various reasons, they just failed to satisfy my particular filming requirements.

"My assignments are so diversified and challenging, I need a versatile production camera that can do just about *everything!* And I find that the CP-16R/A is the only camera in existence versatile enough to do everything I want — and need — it to do. Best of all ... it is the quietest 16mm camera I've ever owned."

## "CP-16R/A is the only game in town!"

"The studio-silent CP-16R/A is ideal for all double system work. Yet it is lightweight, compact, and has all the sophisticated features and accessories I consider indispensable: variable speeds, behind-the-lens metering, orientable viewfinder... you name it.

"Most important, the CP-16R/A also has a high-quality single system sound capability that is integral to its original design — not a modification, or an afterthought.

"When I add it all up: CP-16R/A is the only game in town!"

## Modern production techniques require high-quality single and double system sound.

Says Wilson: "Single system capability is essential these days for most documentary, industrial and PR films, as well as TV commercials. Because modern production techniques frequently call for the editing to be done on videotape, and single system sound makes video transfer real easy.

"That's why my CP-16R/A is frequently used much like a remote video camera ... but with far greater flexibility and superior results. Production costs in the field are cut dramatically, and we are far less conspicuous and obtrusive than any EFP crew would be.

"Occasionally, we want the quality of double system sound *as well as* single system sound backup and editing ease. So we shoot both ways *simultaneously,* running an additional feed from the mixer into the CP-16R/A built-in amplifier, and recording single system sound on striped film. Incidentally, on a recent documentary shot this way, the single system sound quality was so outstanding that we never even used the sound from the Nagra tape!"

***(Above)*** *Anton Wilson at the Panama Canal. "Filming an in-depth feature story about the upcoming canal treaty and its implications, we were able to move fast and reliably with the CP-16R/A, covering what would normally take two months in just ten days!*

*"The camera functioned flawlessly, even in the torrential rain that overtook us when we followed General Torrijos into the Panamanian jungles.*

*"This documentary was so successful it aired both as a two-part series on* Good Morning, America *and as a five-part series on the* ABC Evening News."

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# THE AMERICAN SOCIETY OF CINEMATOGRAPHERS HONORS EDGAR BERGEN

**A.S.C. members gather to pay tribute to a colleague who is one of the world's great entertainers—and no mean cinematographer himself**

Famed ventriloquest/comedian Edgar Bergen, who, for the past forty years has been an Associate Member of the American Society of Cinematographers, was recently honored by his fellow members with a testimonial dinner at the A.S.C. clubhouse in Hollywood.

The crowd which packed the clubhouse to capacity to pay tribute to the beloved entertainer included master of ceremonies Ray Bolger, Mrs. Edgar (Frances) Bergen, long-time Bergen cohort Carroll Rosenbloom (owner of the Los Angeles Rams) and his wife, Georgia.

In commenting on his long friendship with the guest of honor, Bolger said, "Edgar Bergen is one of America's great humorists and one of America's great gentlemen. He has given to all of us a beautiful family and beautiful humor—something that we can take with us long after all of the other funny fellows are gone . . . We shall never forget all of his characters, but most of all, we shall never forget Mr. Edgar Bergen."

The gracious Mrs. Bergen said, "I am very partial to this man you are honoring tonight, but I do remind him once in a while that I gave him the best years of my young life figuring out how to trap him . . . I wish I could tell you that on our very first date he asked me to come and see his darkroom, but instead of that, he took me for a ride in his airplane and I guess I've had my head in the clouds ever since."

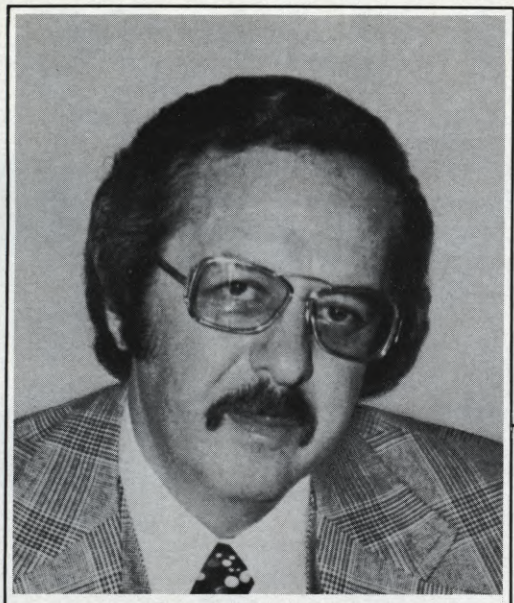
Mrs. Bergen then read the following telegram from the couple's daughter, Candice (herself a still photographer of high professional skill), who was on location in New York starring in "OLIVER'S STORY":

*"Dear gentlemen of the A.S.C. My congratulations on the excellent judgment you've displayed in selecting Edgar Bergen as your guest of honor tonight. I was fortunate enough to have had him as a teacher and was his loyal and devoted pupil. Every nuance, from color to composition, lighting to lab work, I proudly learned at his knee (or on his knee?) and while both of us are a little shaky on exposure and artificial light conditions, he taught me how to see the world and love it through a lens. I wish I could be there to salute him with you tonight, but he not only taught me to love shooting film, he taught me to love being in them. Yours sincerely, a grateful and loving student, Candice Bergen."*

Bergen reminisced about his rural boyhood, his first box camera (a 4 x 5 glass plate job, given him by an aunt at the age of 10) and his abbreviated career as a motion picture cameraman in New York, prior to becoming an entertainer.

He then did a brief turn with his "alter ego", Charlie McCarthy, and this was followed by a screening of films not only photographed, but acted in, by a very young Edgar Bergen. ■

**(TOP OF PAGE) Guest of honor Edgar Bergen addresses fellow members at A.S.C. testimonial. (ABOVE LEFT) Mrs. Edgar Bergen has warm words for her husband. (CENTER) Master of ceremonies Ray Bolger applauds Bergen. (RIGHT) Long-time friend Carroll Rosenbloom adds his congratulations. (BELOW LEFT) Bolger jokes with Stanley Cortez, ASC, who planned the affair. (CENTER) Bergen with sassy alter ego, Charlie McCarthy. (RIGHT) Bolger voices a touching tribute to Bergen.**



*Samuel "Chick" Hyman,*
*President of CAMERA MART*

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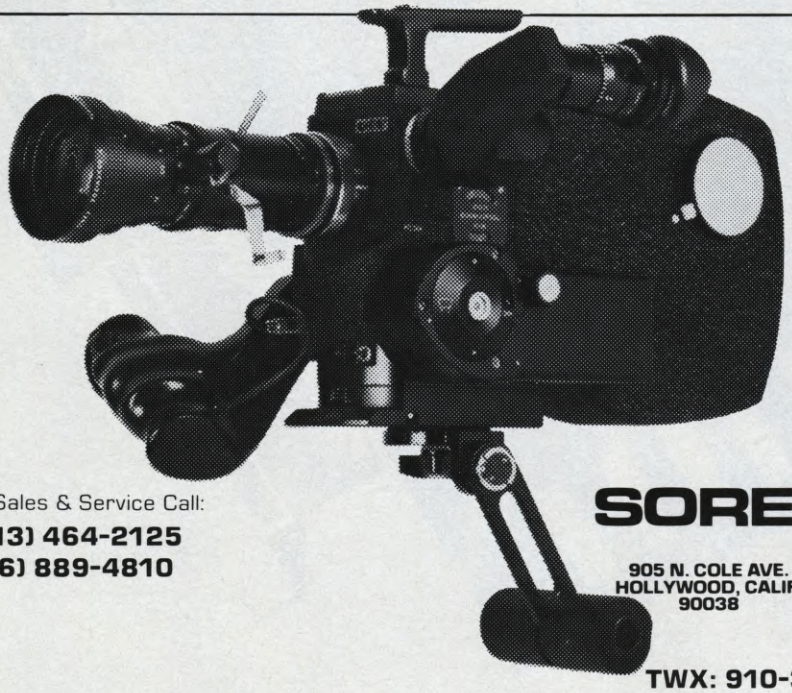

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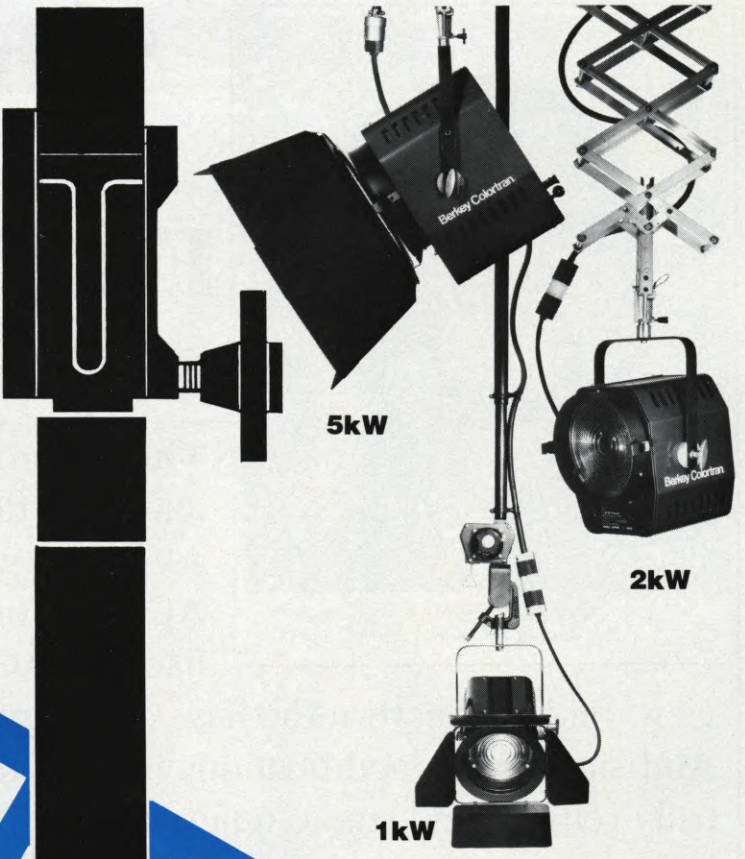


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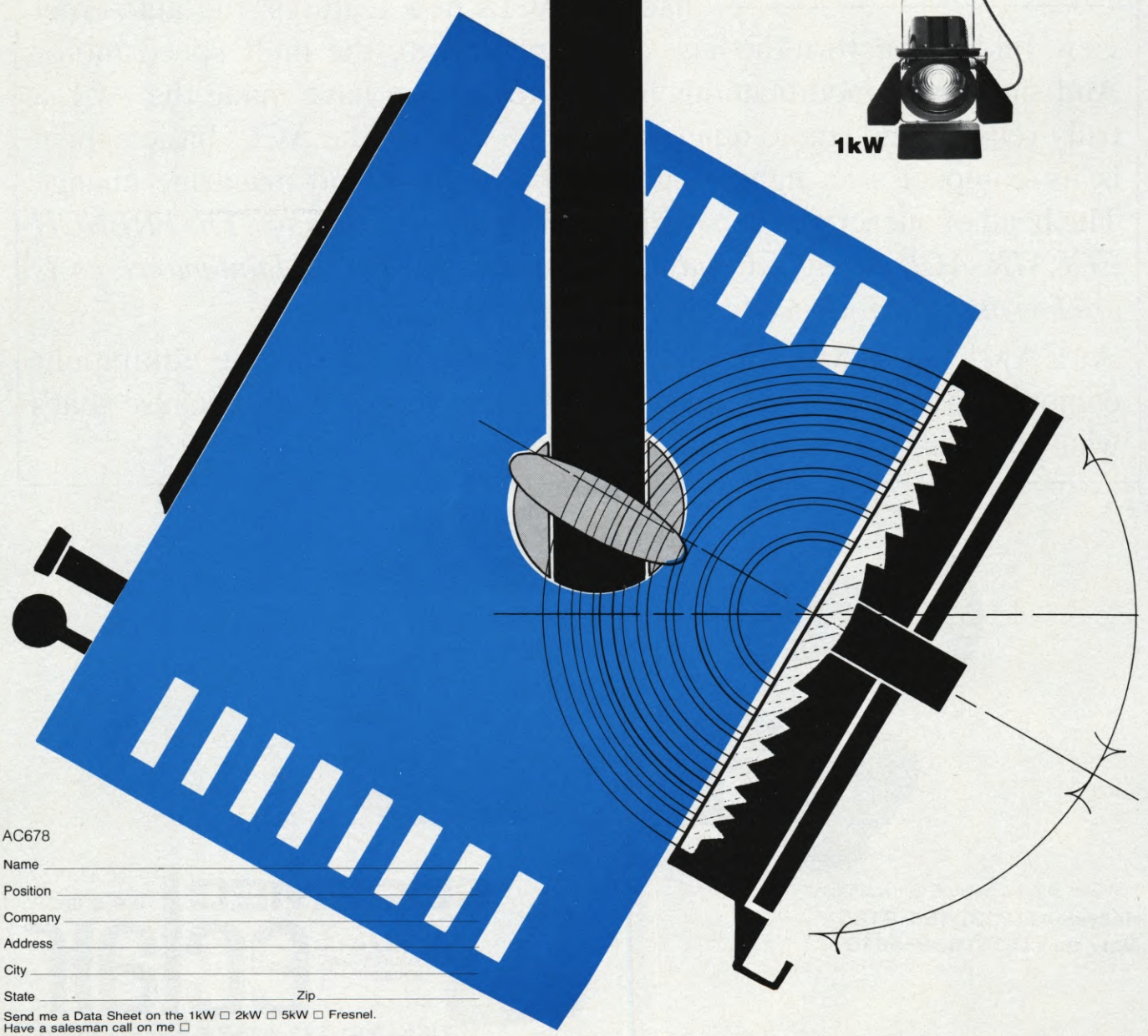

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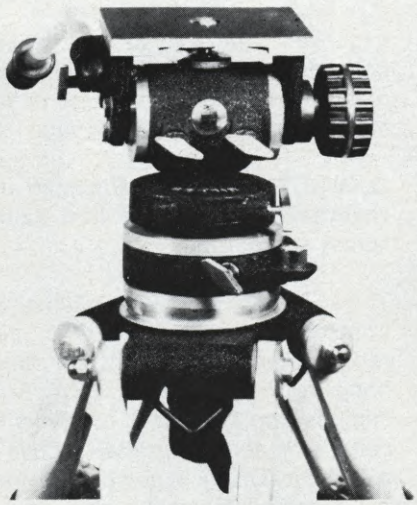

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# NEW EASTMAN COLOR INTERNEGATIVE II (5243/7243) FILM BRINGS 35mm VERSATILITY TO FILMMAKERS USING 16mm COLOR NEGATIVE

**A discussion to clear up the mysteries and misunderstandings that surround this two-step alternative to the familiar CRI technique**

In early 1977 Du Art Film Laboratories began conducting a series of nationwide seminars designed to explain the properties of Eastman color intermediate II film 5243/7243 to filmmakers, editors, and producers. Chairman of the Board Irwin Young feels that many filmmakers working in 16mm have not been sufficiently informed of the potential of this new—for them—intermediate alternative. Both Young and Du Art President Paul Kaufman—a 40-year veteran of the firm which was founded in 1922—hesitate to recommend guidelines for choosing the two-step 7243 method over the more commonly-used color reversal intermediate. Filmmakers should gather the facts and make their own decisions, they say.

The Du Art seminars helped many 16mm filmmakers decide for themselves. The most valuable portion was often the question-and-answer sessions following the formal presentations, Young says. Young answers some of the more common questions here:

**QUESTION: What is Eastman color intermediate II film 5243/7243?**

*YOUNG: It's a new intermediate color film which allows a two-step intermediate system. A color master positive is printed from the original Eastman color negative II film 5247/7247, and then a color dupe negative is made from the master positive. It is this dupe negative that is used for release printing.*

**Q: Will 7243 replace Eastman color reversal intermediate film 7249 in 16mm applications?**

*Y: No. The 7243 film is an alternative or companion method to CRI, not a replacement. The two-step method brings to 16mm filmmakers a technique that has long been used by 35mm filmmakers. It actually predates both CRI and color film by a number of years—black-and-white master positives and dupe negatives were the standard before color photography took over.*

*What 7243 represents is a new intermediate alternative for filmmakers who shoot on 16mm color negative film. Those using 35mm had 5253 before 5243 was introduced, because the two-step method offered certain advantages.*

**Q: Such as?**

*Y: Additional duplicate negatives can be produced without rehandling the original material. In addition, the master positives can be reedited for making additional versions of a film, even though the original negative is in a final cut form. There are other advantages that are of special interest to 16mm filmmakers. For example, it is somewhat easier and less expensive to produce titles using the two-step method.*

**Q: So why has CRI been so popular for 16mm films shot on negative?**

*Y: It was developed to serve a number of purposes. A lot of television shows were shot on 35mm film, and to save the cost of master positives, some of them were edited and reduced to 16mm color reversal intermediates for release printing. In addition, CRI has found a lot of use in producing negatives for release printing in other countries. It was felt that the one-step method would eliminate some of the quality problems that cropped up when second-generation negatives were printed outside of their countries of origin.*

*Many 16mm filmmakers, those who started in 16mm rather than 35mm, have never heard of the two-step method. Their labs are used to working with CRI and never bring up the newer alternative.*

**Q: Is CRI less expensive than 7243, since only one step is involved?**

*Y: For run-of-the-mill production—footage without titles or optical effects—it usually is. Color reversal intermediates are the most direct, least expensive way to go from an original negative to duplicate negative for release printing. Because only one step is involved, CRI has the potential of producing a higher quality duplicate negative—although we feel there is no discernible difference between a CRI dupe negative and one produced through two steps on 7243.*

**Q: When is CRI more expensive than 7243?**

*Y: The cost savings begin to swing over to 7243 intermediates when titles are brought into the picture. Or if many negatives are required for high-volume release printing, it usually costs less to use the two-step method because the B wind printing can be done in the first step. Finally, it's a lot less expensive to do extensive editing and revising of a master positive without touching the original negative.*

**Du Art Film Laboratories President Paul Kaufman (left) and the company's Chairman of the Board, Irwin Young, discuss Du Art's entry into the title-making field. Kaufman is a 40-year veteran of the firm—which was founded in 1922.**

**Q: When would this occur?**

*Y: A client might want a 60-minute, 30-minute, and 15-minute version of the same film. Several master positives can be cut, and duplicate negatives printed from each. The original negative remains intact, or, as edited for the full-length version.*

**Q: How does 7243 save money on titles?**

*Y: When 16mm filmmakers were shooting reversal, they often found it fairly easy to produce their own titles. A simple camera stand setup, some artwork and high contrast film could be used to produce good positive titles. These could be spliced onto a C roll, or just cut in the black leader in the A and B rolls. When the edited reversal film was printed onto negative intermediate film, it was simple to burn in these clear titles over the live action footage.*

*But with the switch to shooting 7247 originals, the filmmaker found that his lab could no longer print his titles. He had to go to an optical house instead. The optical houses were used to working with master positives, not CRIs.*

**Q: But can't titles be made with CRIs?**

*Y: Of course, but the methods are just the opposite of what we are used to using. Just like many people have a personal feeling that it's easier to make a fade in reversal than negative, even though both would work equally well. Instead of burning in titles—clear letters on a black background—the titles have to be held back. That is, dark letters on a clear background.*

*All that clear film provides extra area for dirt to settle in. This dirt is noticeable as white spots on the finished release print. Positive titles have only a small clear area for dirt and scratches.*

*It's a fallacy to say that the two-step method is the best or only way to produce titles. Both negative titles or positive titles should work equally well. But one requires more care than the other.*

**Q: If both methods are equal in theory, how does 7243 win out in cost?**

*Y: If the photographer cannot produce titles himself, he must have the optical house do it for him. In addition, because of the extra care required, titles made for CRIs have to be done over a lot. The makeovers are reflected in the prices charged for those services.*

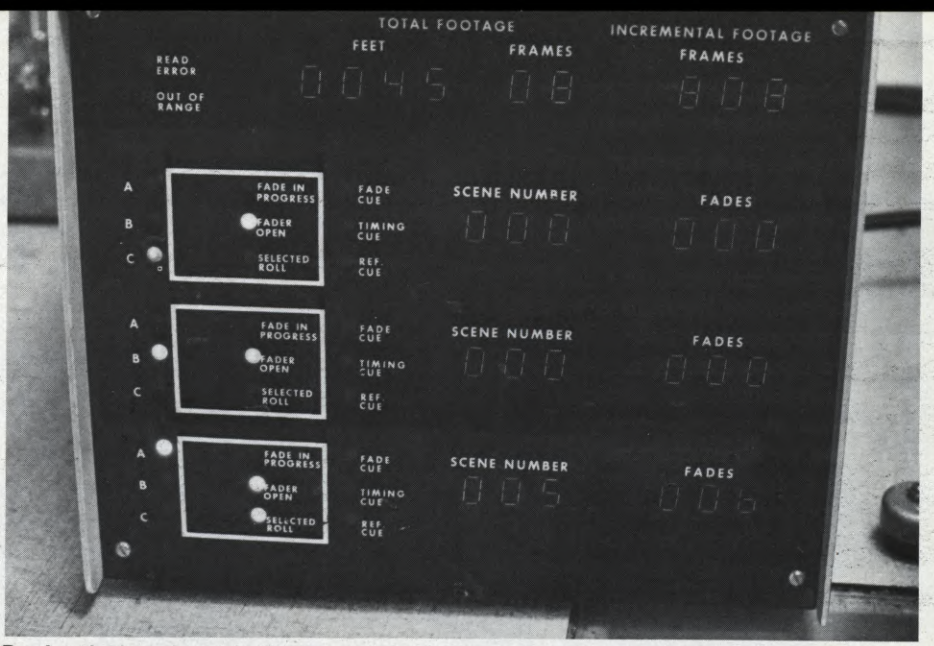
**Q: Why all the makeovers?**

*Y: It might be useful to explain in more detail how such titles must be produced. Both the title and the live action have to be printed onto the CRI at the same time, so that exposure from the live action can be held back in the title area. This means that an aerial image optical printer has to be used.*

*The live action background is placed in the aerial image head—the head farthest away from the taking camera. The negative title goes in the printer head which is inherently much sharper than the aerial image head.*

*The film is arranged in this configuration because the slight image degradation that results in the live action background will not be discernible, but any lack of sharpness in the title will.*

**Continued on Page 603**




**Du Art designed and built computerized film synchronizers that store in memory the location of film edits, and allow the making of automatic fades. In a similarly progressive vein, Du Art has sponsored a series of nationwide seminars to acquaint filmmakers with the pros and cons of using an intermediate positive as an alternative to the CRI method.**

**Du Art's optical printer is used to make a blow-up from a 16mm 7247 original to a 35mm master positive on Eastman 5243 intermediate film.**

**Careful process monitoring at Du Art Film Laboratories assures consistent results from Eastman color intermediate II film 5243/7243.**

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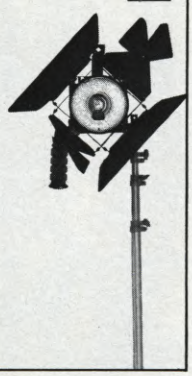


**JOHN MILIUS "HANGS TEN"**
**Continued from Page 555**

**MAC GILLIVRAY: Given that a director is an artisan, molding the elements he is given by the script, what do you feel is the most important emphasis of directing?**

*MILIUS: It seems to me that the foundational concepts are the most important. How the movie is framed and how the performances are delivered are nowhere as important as the basic concept. The more subtle and interesting those concepts are the more subtle and interesting your movie is. Additionally, it is important to be as clear as possible to everybody about your intention—it's communication. Failure on a movie set is usually due to failure to communicate the idea simply. Actors think they want a lot of attention and direction, but simple instructions like "do it faster" or "laugh when you say that" work better. I think that as I get better at directing I'll just get simpler. Once you've set the concept in motion, you're half way there. I used to watch Francis Coppola and say, "God, he doesn't know what he's doing." Then I realized that Francis knew exactly what he was doing. Francis is the best director that I know, giving himself as many choices as possible all within the original concept. He always knows what he is leading to. Always knows what he wants. His means may look scrambled but his ends are always clear, and that's why his movies are so good and work as a whole from beginning to end. Of the group of younger directors, he is certainly the best one. I used to say that you don't do anything well until you put yourself out on a limb. You have to go a little beyond. That's what makes the underlying currents so fascinating. David Lean's films always have more to the scene than what's shown. You can watch his work again and again and every time you see it, it's as if it's the first time.*

**MAC GILLIVRAY: Can you explain the collaboration between you and Dennis Aaberg on "BIG WEDNESDAY"?**

*MILIUS: I've never collaborated with anyone till Denny, and with Denny it was total collaboration. Since "BIG WEDNESDAY" is a story about friendship, it was natural for two surfing friends to write the script. We were able to imbue the feeling of friends reminiscing about things they liked. We had experienced the same time and place which made for a truthful and warm feeling in the script.*

**MAC GILLIVRAY: How would you explain your collaboration with Buzz Feitshans in your company, A-Team?**

*MILIUS: That's the same kind of thing, a loose kind of informal company. I depend so greatly on Buzz. I'm the lazy indolent creative artist type and he gets the real work done. In a more romantic sense I like to think of myself as a colorful combat general: I'm the Patton and he's the Eisenhower.*

**MAC GILLIVRAY: Your films have a very clean, straightforward look. Can you explain your style of photography in "BIG WEDNESDAY"?**

*MILIUS: I like to represent scenes as the eyes would see them—with no gimmicky camera tricks. I like straightforward photography with strong cross or backlight to shape and texture everything well. Shape and movement. Really, I shoot film to cut, not to run in its entirety. I'm always thinking of how I can put one shape together against another—especially in the surfing sequences. I hate zooms and rack focuses. There was a movie called "GETTING STRAIGHT" to which I wish I had the dramamine concession. All the rack focusing made you nauseous.*

**MAC GILLIVRAY: Most of the photographic techniques came from commercial directors, like Richard Lester, who did "A HARD DAY'S NIGHT", "HELP", and other photographically imaginative films. But the trick photography gets old quickly.**

*MILIUS: Notice that those directors change their style from time to time. I always think that a mark of a good director is that he never changes his style. I think Paul Schrader is a good director and you won't see his movies change in style. They'll get better, but it will be the same style. I don't like my first film, "DILLINGER", but my style is in "DILLINGER".*

**MAC GILLIVRAY: Music has such a contribution to the style of a film. Can you discuss the composer and musical style of "BIG WEDNESDAY"?**

*MILIUS: For composer, I chose a friend that had gone to school with me, Basil Poledouris, who I think is immensely talented. George Lucas and I always thought he was the most talented of all of us at USC. I think that he can really give me something that no one else can. I am really pleased with the music he has written and think he'll become an extremely integral part of my movies from*

**Continued on Page 608**

Lowel Solo kit with
Omni and Tota-lights.

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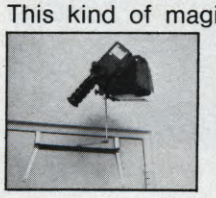

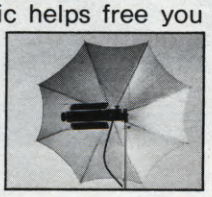

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# AN AMERICAN FILM INSTITUTE SEMINAR WITH GERALD HIRSCHFELD, ASC

**A versatile and highly skilled cinematographer shares his considerable expertise with Fellows of the A.F.I.**

## PART I

As perhaps the most important aspect of education for the Fellows in training as film-makers, historians and critics at its Center for Advanced Film Studies, located in Beverly Hills, California, the American Film Institute sponsors conferences and seminars with top technicians and talent of the Hollywood film industry. These men and women, outstanding professionals in their respective arts and crafts of the Cinema, donate generously of their time and expertise in order to pass on to the potential cinema professionals of tomorrow the benefits of their vast and valuable experience.

In keeping with this tradition, Cameraman's Local 659 (IATSE) sponsors a continuing series of seminars with ace cinematographers. These men—both contemporary working Directors of Photography and some of the now-retired "greats" of the past—meet informally with the Fellows at *Greystone,* the magnificent estate which is the headquarters of the A.F.I. (West), to present valuable information on cinematographic techniques and answer questions posed to them. Very efficiently introducing and moderating each of the individual seminars is "Emmy" Award-winning Director of Photography Howard Schwartz, ASC.

The dialogue which follows has been excerpted from the A.F.I. seminar featuring versatile cinematographer Gerald Hirschfeld, ASC. It followed a screening of Mel Brooks' "YOUNG FRANKENSTEIN", on which he functioned as Director of Photography.

**HOWARD SCHWARTZ: Though working with Mel Brooks can be a lot of fun, I imagine it can be kind of hectic, too, for a cameraman. With Marty Feldman and everything, you must have had a million laughs on the show. It must have been hard to concentrate on doing work. Is that the way it went on the set?**

*GERALD HIRSCHFELD: We had a lot of fun on the set, but one thing I had to do continually with my operator, Tim Vanick (who did a terrific job), was caution him: "Please don't laugh when you're operating. It shakes the camera." But he did anyway. I mean, he couldn't help it. This was a funny situation. There were tense moments, of course. Mel Brooks was carrying a lot of weight, and it's very difficult when you're wearing two hats. He's a writer, but he's also a producer. It makes for a very difficult situation when you have to be both the actor and the director.*

**SCHWARTZ: Jerry, you shot this in Double-X and I forgot what the speed of it is now. What, about 250?**

*HIRSCHFELD: Well, yes. However, I pushed it for the look of the picture, and had an ASA of 500. Incidentally, you saw a version of this picture nobody, I think, has ever seen. You saw it projected Academy aperture. It was shot 1.85-to-one. I enjoyed it because I saw more of the sets than I ever saw before. But there's always a problem when you're shooting a film in 1.85 and you have to project to the Academy aperture. You're photographing a lot of things that may never be seen on the screen, unless they're going to televise it. And you get a directive from the studio telling you that these are the proportions you have to photograph to—which is the Academy.*

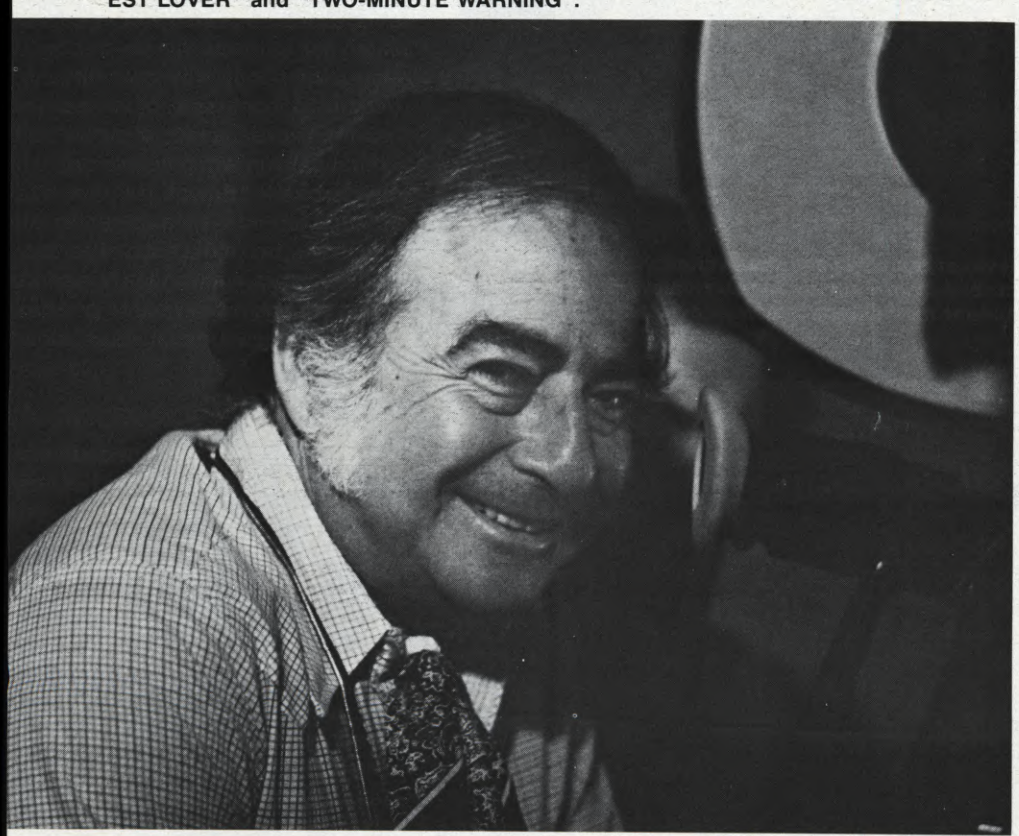
**SCHWARTZ: It was interesting, though, because it was still well composed.**

*HIRSCHFELD: Yes. There was just a little bit of excessive headroom from time to time. But at other times you saw better pictures than you normally would have. Very often one of the distressing things is the fact that you're putting in ceilings to avoid shooting off the set. You know that the ceiling you're putting in will not be shown in 1.85, but you're protecting that Academy aperture.*

**SCHWARTZ: Aren't you glad now that you did?**

*HIRSCHFELD: For today, yes. It would have been very embarrassing otherwise. I assure you I would have been back in the projection room at the first reel.*

**Genial Director of Photography Gerald Hirschfeld, ASC numbers among his many feature credits such pictures as: "GOODBYE COLUMBUS", "LAST SUMMER", "DIARY OF A MAD HOUSEWIFE", "THE INCIDENT", "COTTON COMES TO HARLEM", "SUMMER WISHES, WINTER DREAMS", "T.R. BASKIN", "YOUNG FRANKENSTEIN", "THE WORLD'S GREATEST LOVER" and "TWO-MINUTE WARNING".**

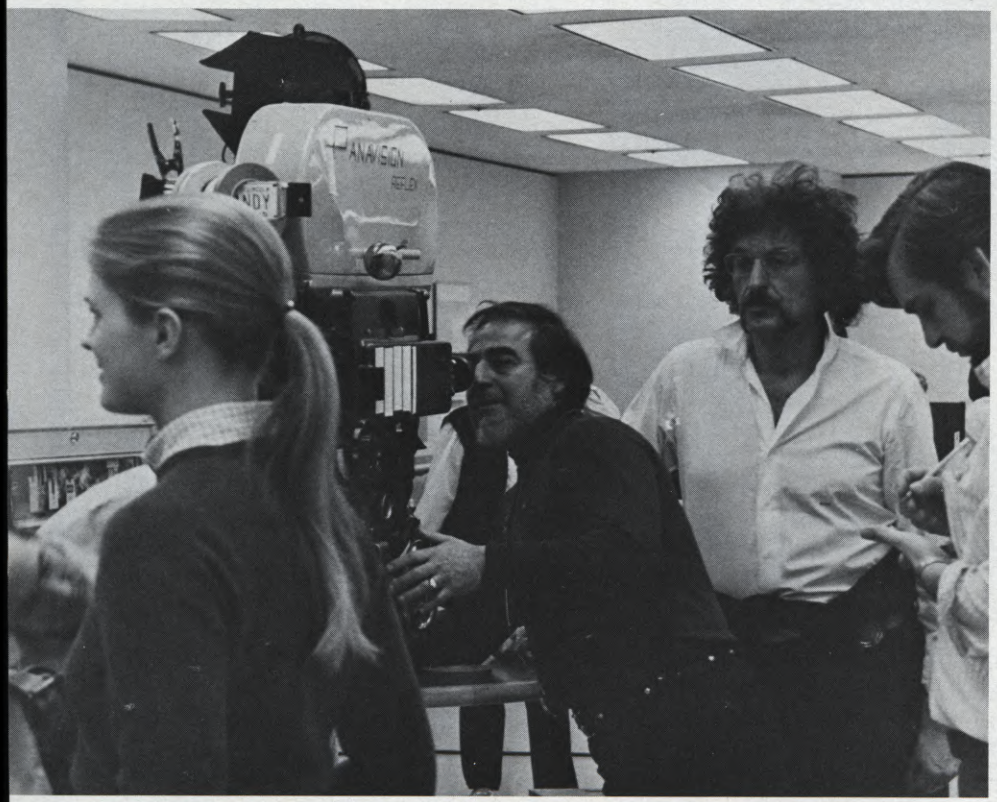


**SCHWARTZ: What kind of a stop did you shoot at in most of the picture? Did you force one stop on it most of the time?**

*HIRSCHFELD: The purpose of the forcing was really not so much to get extra speed. If I wanted more speed I could have used Tri-X film, which would have been a little more grainy. But in order to capture the feeling that Mel Brooks wanted—of recreating a bit of the old time texture of films—he wanted it very contrasty. He wanted the backlights to really punch through and he wanted the shadows dark. One way of doing that, of course, is to overdevelop the film and you increase the gamma or the contrast of the film. By so doing, you also gain the effect of the additional speed. So I think the ASA I worked on there was somewhere around 450 or 500. In addition, of course, when you're shooting low-key photography, basically you can underexpose it by at least a half-stop to a stop to begin with. As a matter of fact, the only disagreement that Mel Brooks and I had, and still do have, is that he feels no matter what the mood of comedy, it should be bright. There were a number of scenes in there which I felt were just printed much too bright. But that's the only way he would have it. And it's very peculiar. They say, "Well, we'd like it to be really low-key, with one side of the face dark, almost black. But we want to see both eyes." That's a pretty good trick, you know. One thing mitigates the other. It just doesn't work that way. But I can understand their point of view, because if you can only see one eye of Gene Wilder, many times you would have lost so much. So many of the laughs that you had were just in those facial expressions.*

**Eyeball-to-eyeball with Mel Brooks on set of "YOUNG FRANKENSTEIN".**

**"T.R. BASKIN", with Herbert Ross directing and Candice Bergen starring.**




**SCHWARTZ: Would you need an eyelight for Marty Feldman?**

*HIRSCHFELD: No. No matter where I put a light, he would catch it. But I'll tell you the big problem that I had. After I got to know him a little better, I said, "Marty, which eye do I look in?" But then I really got serious one time and I asked him, "What is your vision like?" Because, when you have one eye going this way and one that way, I couldn't imagine doing my job with that. He said it's normal to him. Actually what happens is that you adapt. Your brain adapts to the physical situation. He must know what he's doing. He's gone on to write, direct and act in a film that's just being completed now, "THE LAST REMAKE OF BEAU GESTE". He shot that in England and Spain.*

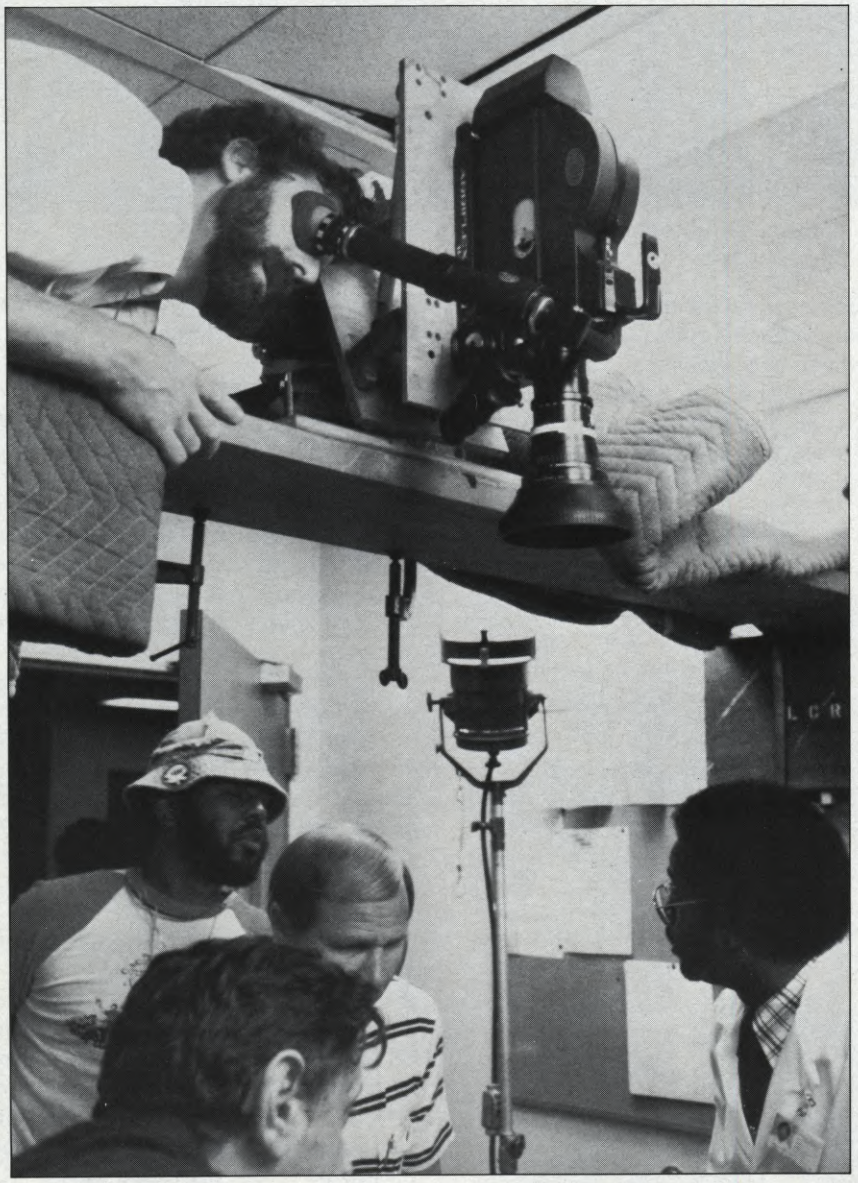
**QUESTION: I have two questions to ask. The first is: What scenes do you think were printed too hot? The second, please talk about—since all the other films you probably worked on were color—the difference in terms of art direction, in terms of how the sets were built for black and white. It's getting to be a lost art these days.**

*HIRSCHFELD: Well, the first one; you kind of have to think back in there. The scene at night when Inspector Kemp arouses the people to go to hunt the*

**Continued on Page 584**

# Arri 16SR on location in tight quarters: flexible unobtrusive and fast.

"Producers like quality," says Jack Cooperman, "But most of them like speed even more. With the 16SR, I found it a lot easier than before to get good production quality fast."



"10mm focal length on this one," says Mr. Cooperman. "I had to keep my body up high, out of the shot. The camera's small size, light weight and adaptable finder let me rig the whole thing with *one* plank, and get right up against the ceiling. A fast setup, and *compact*."

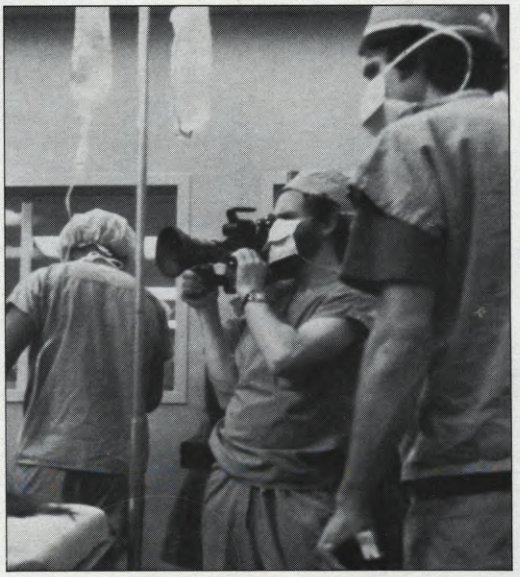
Until he shot this segment of a March of Dimes documentary Special, Jack Cooperman had never used an Arri 16SR. Here are some of his comments:

"We were shooting medical staff and patients at a hospital. To catch the action while it was spontaneous, *and* to keep out of everyone's way, we had to be fast and flexible."

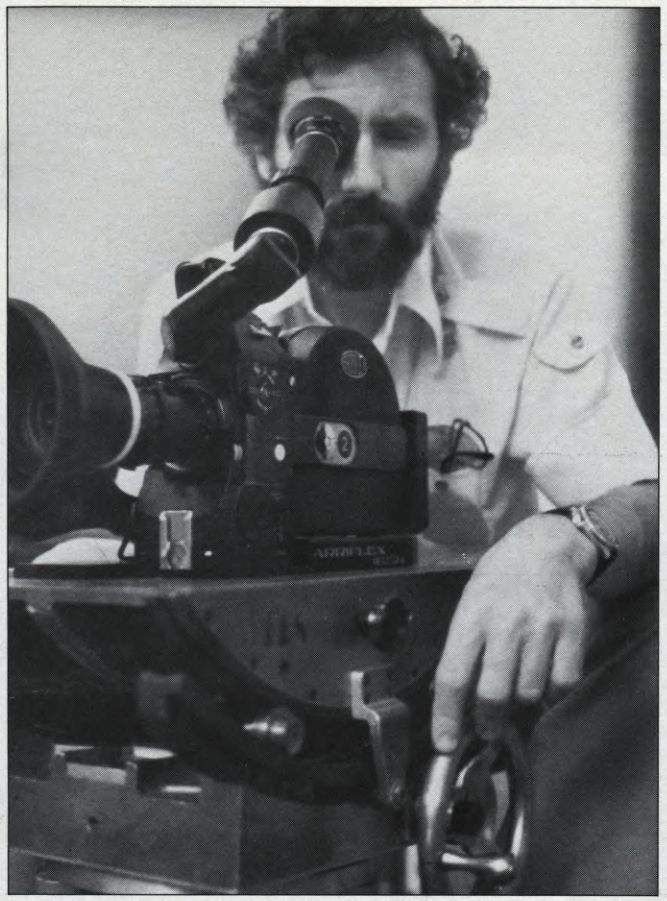
"I found it *pleasurable* to work with that camera," says Mr. Cooperman. "It's a studio-quality tool; and it does everything you expect, plus quite a few *new* things."

Produced by March of Dimes Foundation; Ed Franck, Director; Jack Cooperman, Director of Photography; Jack Green, Camera Operator.

"Shooting in the crowded Operating Room, we had to keep out of everyone's way. No tripods."



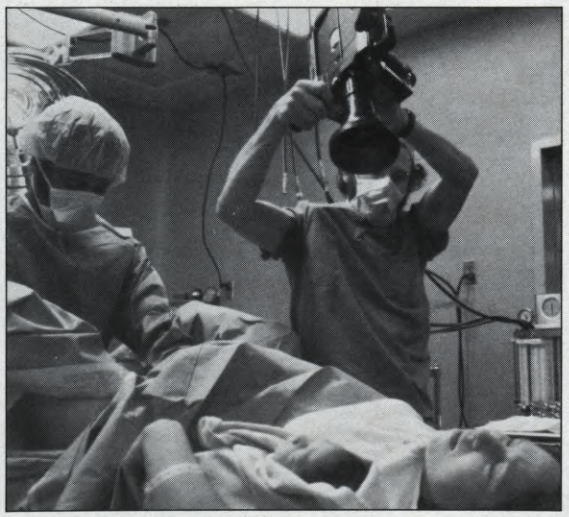
STILL PHOTOGRAPHS BY RON GROVER, LOCAL 659 IATSE



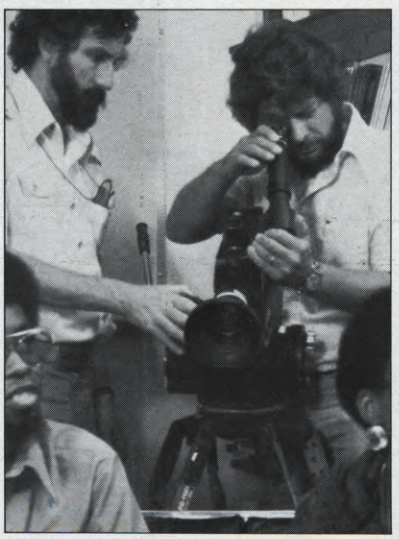
"For one move, I needed to start next to the wall," says Mr. Cooperman. "With the SR's amazing viewfinder, I could put the Worral head *against* the wall, and still see what I was doing without mashing *my* head."

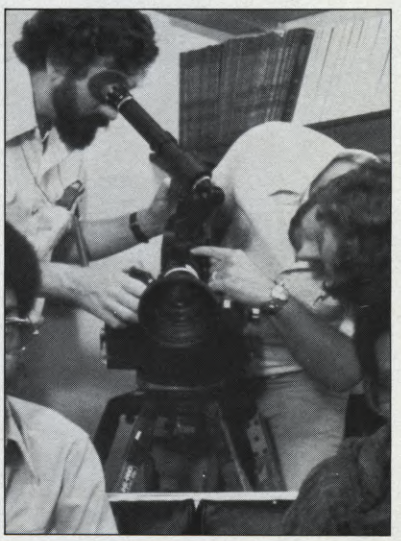
"What was important to me about this camera was the ability to keep the creative flow going at a *steady pace*. The fast setups and reloads were ideal for unscripted, spontaneous action."

"I'd lock it off, swing the finder over for the Director, swing it back, and we'd roll. *Instantly*."



"The birth sequence required unobtrusive shooting. The cable-free battery on the camera's back helped a lot."





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## WATER PHOTOGRAPHY

**Continued from Page 556**

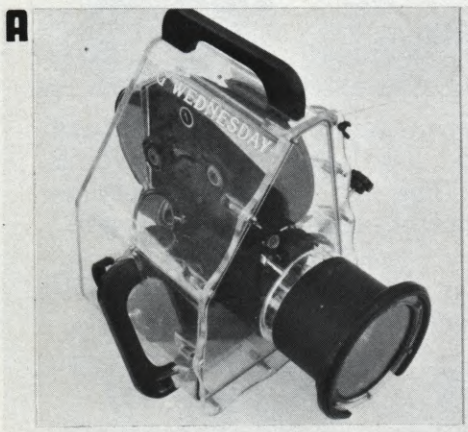
I'll need all the air I have just to surface. Finally the wave releases me and I stroke for the top, but I'm getting nowhere. Like quicksand, there's no traction in this aerated water. I swim furiously, attempting to reach the surface, but the bubbles of churned water hold me down. Finally, nearly breathless and in a panic, I break through and gasp for a breath of air. On top, there's a quick count of heads and everyone's all right. As we all swim to retrieve our surfboards and cameras, we realize that this same wipeout may occur several times again today. However, now that we've dedicated ourselves to filming "BIG WEDNESDAY" the right way, we know that there's no alternative to getting out in the big surf and doing it!

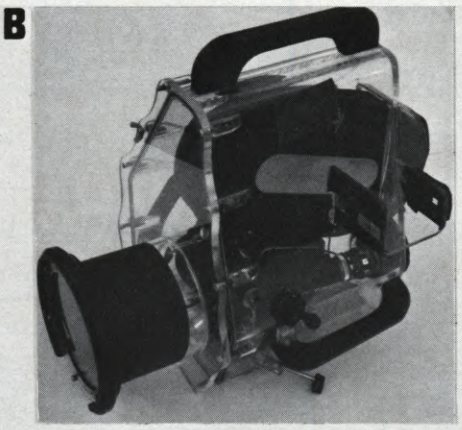
*"BIG WEDNESDAY"*

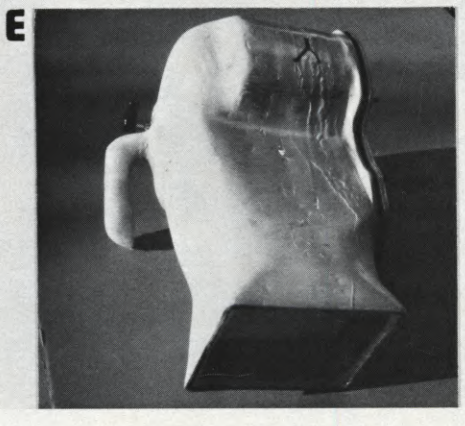
"BIG WEDNESDAY" is the seven million dollar feature film from Warner Bros. and John Milius that combines the exciting action of big wave surfing with the

**John Milius directs actors Dennis Aaberg and Rick Dano and cameramen Greg MacGillivray at Cojo Point. "BIG WEDNESDAY" is unique in that many of the cast and crew are actual surfers able to apply their experience and knowledge of the surf scene to lend a special element of truth to the production.**

**Five of the eleven waterproofed cameras are below. A & B are two views of the Arriflex housing capable of shooting from 24 to 80 fps with 35mm wide angle to 150mm telephoto (with separate front plate and snout). Complete with follow focus control, aperture control and reflex or viewfinder viewing, this camera was used for dialogue scenes, telephoto surf scenes and was surfboard mounted for water dolly shots. C. The smallest 35mm housing to be used beneath the 20 foot surf, this rubber bladder housing was compact enough to swim with in the turbulent surf. It housed a 40 or 50mm lens and a 50 fps Eyemo. D. Another high impact water housing used by surfers while photographing their feet while surfing and in the violent surf zone. To be used with Eyemo and flat lenses, or 30mm Panavision. E & F Impact Cameras to be used with 50 or 75mm lenses.**





intimate and fascinating life of three friends growing up along the California coast from 1961 to 1974. It's a wonderful story about values and about friendship, about loyalty and love. To complete the five surfing sequences that serve as an exciting background to the life of these friends, our special water camera teams filmed in California at one of the best small wave locations in the world, Cojo Point, and in Hawaii at the finest big wave locations, Sunset Beach, Waimea Bay and Banzai Pipeline. The task was not an easy or a safe one. Many weeks were spent waiting for the perfect waves and lighting, and many injuries were sustained in the course of action. There were those who felt that our task of filming giant surf from the water was impossible, but as Milius was to say: "Just as Lawrence of Arabia said to Ali, 'Aquaba is there; we merely have to go.'—we have dedicated ourselves to filming the waves in a next-to-impossible manner and have gone there."

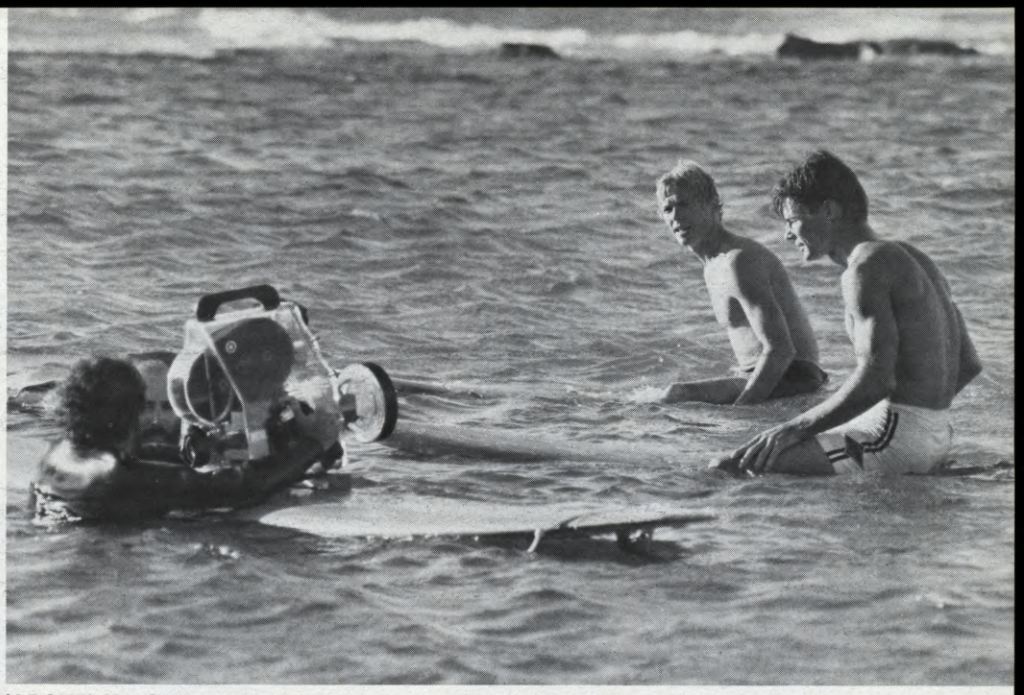
*THE DREAM*

From the time that John Milius first encountered surfing in his teens, he has wanted to make a film about surfers. While writing, then directing some of the most successful films of the 60's and 70's, his dream has been to capture on film the heroic quality of men challenging the tremendously powerful force of a wave. With "BIG WEDNESDAY", Milius carefully and meticulously guided his dream to a graphically arresting reality.

Working with Milius has been a joy and a challenge. He is perhaps the most creative and universally talented filmmaker I've encountered, with strong knowledge and sensitivity in every facet of film production. However, because his fortes are writing and directing, his guiding hand is always moving toward the dramatic whole of the film. From the time he brought me into the project as a specialist in surfing and action filmmaking, we have worked very closely in making the film as authentic, realistic and visually exciting as possible.

*THE CONCEPTS OF PHOTOGRAPHY*

From the beginning, Milius wanted the surfers to be portrayed as nobility . . . knights, warriors, royalty, conquerers of the sea. This heroic quality had to be incorporated in the way we photographed the surfers and waves. However, in conveying the challenge of the "knight" versus the wave, the photography of the wave was even more important than the photography of the surfer. The waves had to look incredibly dangerous, as though they were gaping jaws rushing to devour their prey. Whenever the wave approached the camera, the audience had



**(ABOVE) MacGillivray films a dialogue scene with Jan-Michael Vincent and William Katt from the surf zone in Hawaii. Wireless microphones were embedded in the surfboards and dialogue was transmitted to recordist on shore. (BELOW) Milius, Mark Warren (boat captain and top surfer), MacGillivray and George Greenough rehearse a boat dolly, while riding a wave at Cojo Point. The Boston Whaler was used in small surf as a dolly with the action of the camera.**

**In Hawaii, Jack Willoughby and Lance Williams ready the boat mount built by Nelson Tyler (of Tyler Camera Systems) to absorb the violent and sudden action of the boat manifested at high speeds. Its gyro system smoothed out the ride considerably.**

to have the impression that both camera and cameraman had been destroyed by a force no less powerful than a crushing ton of wet cement.

This entire concept of making the waves look treacherous is in opposition to the normal method of filming surfing. Television viewers, watching ABC Wide World of Sports, are accustomed to seeing surfers glide across twenty-foot waves with effortless grace. The surfer might fall off the board at some point, but there is never any doubt as to his survival, regardless of the force of the wave. Our job was to counteract this impression. We had to make the waves look as dangerous as they actually are. To give them this quality of danger and menace, the color and lighting of the waves became extremely important. For the "BIG WEDNESDAY" sequence that climaxes the film, an overcast lighting gave the waves a dark menacing look, as opposed to the traditional lighthearted sparkling texture of sunny days. Further, we found that rough, windblown and choppy waves gave the greatest sense of the forbidding, ominous quality of big wave surfing, even though these waves are the most undesirable to ride. In addition, by underexposing one to one-and-one-half stops, the water was made to look even darker and more mysterious. The use of pola-filters further enhanced the deep, dark quality of the water by reducing the "pretty" effects of the flares and reflections on the water's surface.

To further intensify the action and excitement of the big wave sequences, we photographed close, with sometimes as many as three water cameramen positioned right beneath the breaking wave. This angle, looking up at the wave with a wide angle lens, magnified the inherent power of the wave, making it enormous. To increase the size of the wave even further, we used an unorthodox framing style. Taking advantage of the Panavision wide-screen frame, which is relatively short in height, we cropped off the top of the wave, giving the audience the feeling of an unlimited height to the wave, extending far above the top of the screen to the roof of the theatre. In this manner we were able to make 20-foot waves look 40 feet in height.

Anyone familiar with the photographing of miniatures for motion pictures is aware of the importance of film speed, or frames-per-second. Never before has an action sequence been so concerned with the speed at which the film is run through the camera. Through many years of photographing and editing action sequences, I have learned the importance of precisely choosing the correct frame rate for a specific action sequence. We utilized the concept of variable film speeds in order to make the waves in "BIG WEDNESDAY" look even more treacherous and looming. The frame rates we used varied from 20 frames-per-second to 120 frames-per-second. Sometimes we would have five cameras running on the same action and each would be designed to highlight a different part of the action, each using a different frame rate. Through these general concepts of photography, developed by John Milius and myself in the early stages of production, the "BIG WEDNESDAY" sequence has an excitement, a beauty and a frightening quality never before achieved in an action sequence.

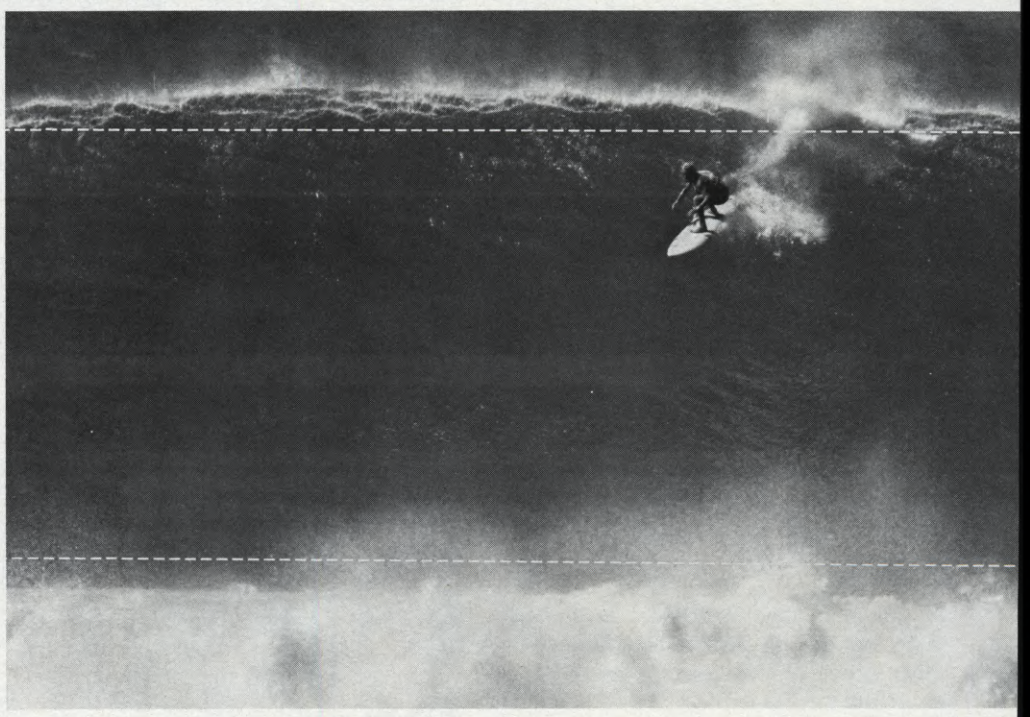
*THE SPECIALIZED EQUIPMENT*

In order to accomplish the task of subjectively capturing the truly awesome and threatening nature of the big waves, the bulk of the filming had to be done in the surf itself. Specialized equipment had to be manufactured to enable us to place camera and cameraman inside the impact zone in large surf. To accomplish this necessary end, eleven distinct water housings and cameras were designed, built and tested, each with a different purpose in mind. Because these waterproof cameras were to be used in large surf, they had to be very compact. If the camera was too large, the strength of the wave would rip the camera from the cameraman's grip, perhaps plunging it to depths where it would be smashed on the

**Continued on Page 610**

**William Katt exits water, after filming scenes of himself surfing. MacGillivray would accompany the actors into the surf, assuring the camera operation, direction and a clean porthole for the lens.**

**By cropping off the top of this huge wave, ridden by Cheyne Horan, and utilizing the wide, but short, Panavision frame, the audience has the illusion that the wave is even larger than it is, looming past the top of the screen, perhaps to the roof of the theater.**

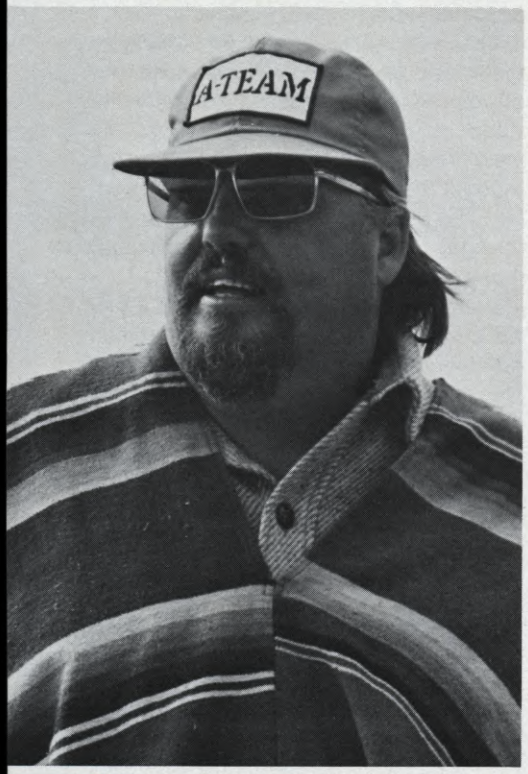


**BEHIND THE SCENES**
**Continued from Page 552**

subculture during the 1960's. Jan-Michael Vincent plays Matt Johnson, the premier surfer of the group whose life is an extension of his surfing ability, his adolescence, and his domination of an era. Vincent who starred in "BABY BLUE MARINE", "WHITE LINE FEVER", "VIGILANTE FORCE" and "DAM-NATION ALLEY", has been surfing since the age of 15, when he would leave school in Hanford, California, and head for the ocean. He comes to the role of Matt with ease and determination, playing a character he understands in a situation with which he can identify.

"BIG WEDNESDAY" is the third major feature for William Katt, who received

**A wide view of Cojo Point, on the California coast above Santa Barbara, a favorite of diehard surfers because of its fine waves and lack of development.**




**Director of Photography Bruce Surtees, son of triple Academy Award cinematographer Robert Surtees, ASC, and himself a nominee for "LENNY".**

outstanding reviews for his performances in "CARRIE" and "FIRST LOVE". In "BIG WEDNESDAY" he plays the part of Jack Barlow, the most perceptive and sympathetic of the three friends. A serious surfer since the age of 11, Katt brings a quiet, understated enthusiasm to his character, giving the part both a personalized dimension and a defined credibility.

Gary Busey plays Leroy, a character who is nicknamed "The Masochist", and who is the most uninhibited of the three surfers. A native of Oklahoma whose assertiveness and spontaneous energy are the delight of his friends, Leroy is an especially appropriate role for Busey, who was born in Goose Creek, Texas, and is making his fourth consecutive film for Warner Bros. release. His first, "THE GUMBALL RALLY", was followed by "A STAR IS BORN" and "STRAIGHT TIME".

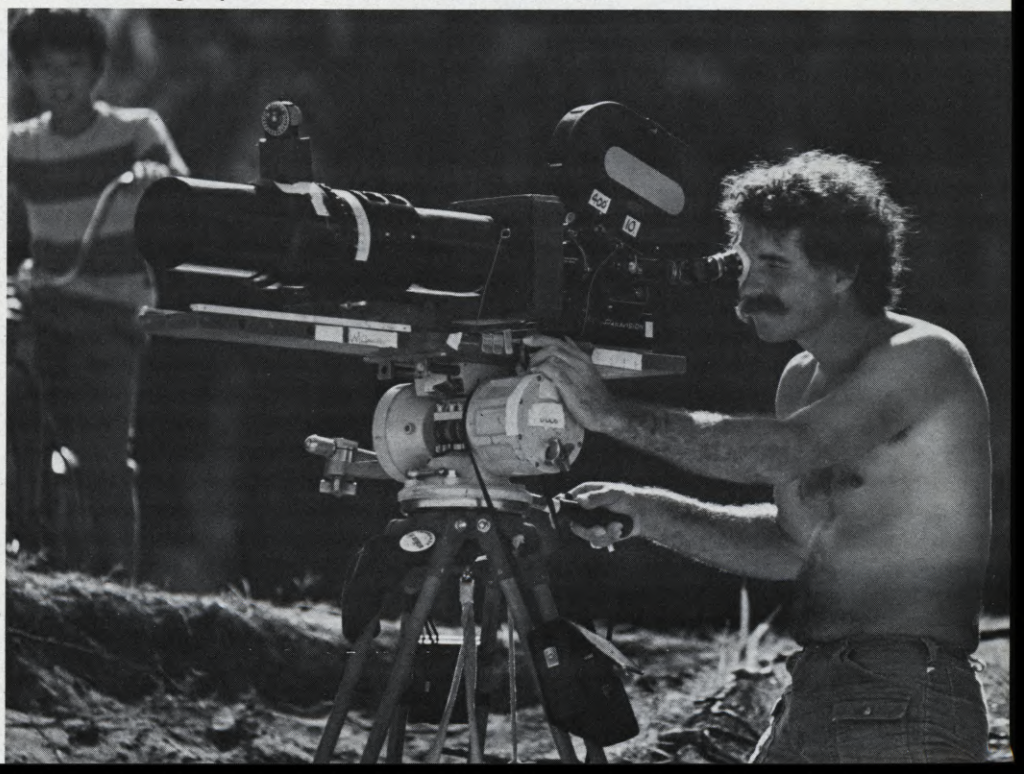
Patti D'Arbanville plays Sally, a girl who comes to the beach area from Chicago and is quickly the focus of Jack's romantic interest. She has been a model and an actress since the age of three, when she became the Ivory Soap Baby, an assignment she held until she was six years old. She has appeared in "MIDNIGHT COWBOY" and "RANCHO DELUXE", as well as a number of films in England and France. "BIG WEDNESDAY" is her first starring opportunity.

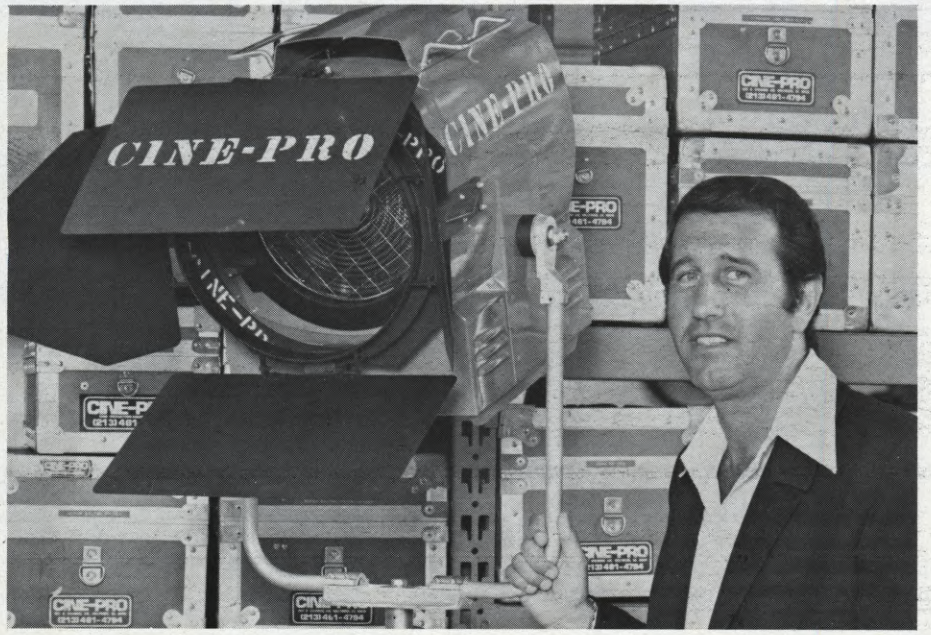
Surfing is the thread of continuity in "BIG WEDNESDAY" and it is an element in the film which has received John Milius' devoted attention. This is the first feature which takes surfing seriously. It is non-exploitative in this respect, giving the sport an almost documentary reverence. There is nothing casual in the treatment of the surfing footage.

Two stars of the film, Jan-Michael Vincent and William Katt, both surf, and do their own surfing in the movie. Likewise, Sam Melville and Gary Busey learned to surf for their parts, and numerous surfing stars appear in "BIG WEDNESDAY" as themselves, the notable standout being Gerry Lopez, who is featured in a dramatic role, as well as in some extraor-

**Continued on Page 589**

**On-shore cameraman Mike Chevalier shoots scenes of surfers with 2000mm Panavision lens, Arriflex high-speed camera and O'Connor 200 Head.**



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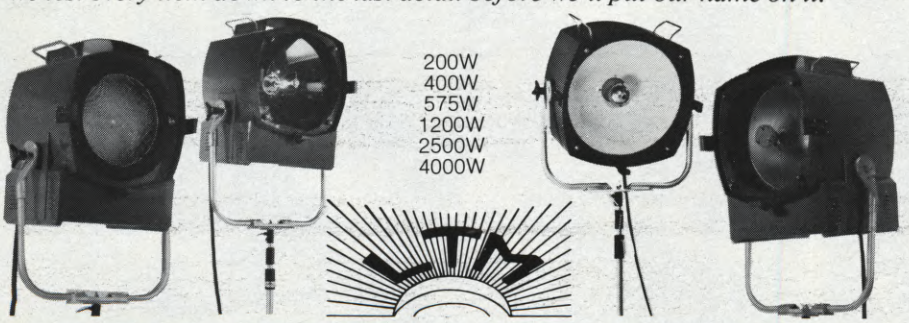
*Carl Porcello is President of Hollywood's widely-known Cine-Pro Company, which supplies top quality motion picture production equipment to film-makers, television studios and video tape producers for use in Hollywood and on locations around the world. In a few short years, Carl has risen to become one of the most important and highly respected suppliers of the industry. He is discriminating to an extreme in selection of the products he will handle because, as he says, "If a producer has problems with my equipment, that automatically means I've got problems with the producer, so we test every item down to the last detail before we'll put our name on it."*

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**FILMING IN MALAYSIA**
**Continued from Page 599**

routine for these shots. Our pilot and owner of the aircraft, Mr. Greg Board, had accrued much seaplane experience and knew his aircraft well, so we eventually solved the problems. We were helped by portable VHF communication.

The most successful technique for these shots was to find a suitable headland near the estimated lift-off or set-down point and use our 25-250mm lens, which gave us a great amount of flexibility. The aircraft looked particularly good when leaving the water in a three-quarter/front-on attitude to camera. The almost constant haze bothered us with these shots and suitable conditions were rare, if one considered atmospheric conditions as well as wind and water conditions.

I have to say my respect for seaplanes grew out of my experience with the Grumman Mallard; it performed well, often in unsuitable conditions, and in view of the fact that it was 29 years old, I thought it caused surprisingly little trouble. The plane was also an amphibian so this gave the script writers another dimension in which to work.

I enjoyed my time on "BAILEY'S BIRD", but found the six-day schedule gruelling in the tropical climate. I was pleased to work again in Asia, and found that most of our local crew members were willing and proved to be of valuable assistance to the Australian crew. I look forward to my next assignment in this part of the world. ■

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Arrangements as to availability and other details are to be made directly with the individual A.S.C. member. For further information, contact: American Society of Cinematographers, P.O. Box 2230, Hollywood, California 90028. Telephone: (213) 876-5080.

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Continued from Page 575

*monster down, I thought that was much too bright.*

**COMMENT: The scene in the square.**

*HIRSCHFELD: Yes, in the square. There were numerous ones. Actually, there was a scene at the railroad station where he first meets Igor. I really had a nice mood in there. I let one side of Igor's face go off into the shadows, but you could still see his eyes. You couldn't miss them. But Mel said, "No, no. It's got to be brighter." It threw me out of perspective with the feeling of the shot. But the second question was?*

**QUESTION: It was about how, since you're making a black and white film—?**

*HIRSCHFELD: Oh, yes. This is an interesting thing. It seems that before you work on a film, you have an interview generally with the director and producer. From that interview they're supposed to decide whether they're going to hire you or not. Well, obviously, they're not going to know anything about your photography from an interview. They've either seen some of your pictures, or know of you by reputation, or whatever. So I guess that the interview is mainly to see if they think they're going to be able to get along on a personal level, a social level, with you. One of the first things that Mel Brooks said to me was, "We've seen your films and most of them are color films. How do we know you can shoot black and white?" I said, "Well, I guess you don't. But I've done black and white." Then he said, "We want a certain look here." I said, "We'll make some tests and see what we can do about it." And then he started to put me on and I wasn't aware of it at the time. He said, "In 'DIARY OF A MAD HOUSEWIFE', do you remember that scene in the bathroom? I think the tub was very hot." I said, "Gee, it might have been, but I guess it didn't spoil the scene, because I never heard anybody else complain about it." And he said, "And the windows; I could see reflections of the gels on the windows." Now, at this point, I knew he was putting me on, because the whole thing was shot in the studio and there were no windows to gel. He was being very serious about it, as he can be, as a good comedian can be. And I said, "Mr. Brooks, if you make one more disparaging remark about my photography, I'm leaving here; just so you know it." But I said it with a smile on my face. He smiled and he realized that I had caught on to him. To me, it wasn't going to be any problem doing something in black and white. I had done some eight, or ten, films in black and white before—the only one that was of any note, that anyone might remember, was "FAIL-SAFE". That's still being shown on television. When I realized I was going to do "YOUNG FRANKENSTEIN", I dusted off a lot of color filters that I had and began to look at some of my notes on black and white photography. I think every cinematographer keeps certain little notes that he might need. I tried to visualize in my own mind what I'd be doing filterwise. In doing color work, the only filters you're*

**Sometimes problems just drive a cameraman right up the wall.**

**On location in Japan for "MASTERMIND". Alex March Director.**

*using, basically, are the ones that correct the film for the type of light you're using. But now, going into a black and white picture, we're used to using filters for many other things, as most of you I'm sure probably already know: to control the color of the sky, to lighten foliage, to take care of complexion, for doing day-for-night shots and everything else. Then I read the script. There was not one day exterior shot in the whole picture. The exteriors were all night, as you saw. The day shots were all done in the studio. There was not one day exterior location in the entire film. So I didn't need any filters.*

**QUESTION: What about getting black and white film processed these days?**

*HIRSCHFELD: One of my biggest problems, which may surprise most of you, was that the laboratories and the technicians in the laboratories had really forgotten how to do black and white feature production. They were still doing black and white for titles and for mattes, but this is usually all high-contrast development. One of the first things I had to do was series of tests, not so much for myself, but for the lab. As far as working with the art director, Dale Hennessy is just a crackerjack; I think he worked on "KING KONG". The thing I had to work very closely with him on—because our sets were just beautiful—was the color of the stone. He had it quite dark. I said, "First of all, I'm going to underlight that stone. With the way the film is being developed to a higher contrast than normal, it will go almost black. So let's paint it lighter, to grey." He thought it was much too light. But once he saw some of the tests, he realized it wasn't. I asked him to also put some varnish on it, because it was flat. He said, "What's that going to do?" I said, "It's going to put some life into it." In black and white you have to work with things that you don't need in color. In color you've got color contrasts. With black and white you don't. It's all shades of grey.*

**Shooting in stadium for "TWO-MINUTE WARNING".**

**Filming a watery scene for "LAST SUMMER".**

**QUESTION: Did you use any diffusion on the lens or anything?**

*HIRSCHFELD: Just in one scene. I hadn't planned to do it. It was a scene where they start out in the laboratory and she's wearing a sequined dress. Up until then, there really had been no love scene, unless you want to call that scene outside the railroad train a love scene. Those were really comedic. Mel said, "You know, Jerry, make this just a little different from the other scenes. It's kind of a tender moment between the two of them that's been building up to this, because of all the gimmicks and gags and what-not." I saw her dress and I said, "How would it be if I put a star filter on her? It will give it a little diffusion and also make it look just a little bit different." They were delighted with that. Then I reprised that again when they were in the bedroom. If you noticed, the candles in the background had that same little effect. I don't generally like to do something that'll be obvious, but in this particular case I felt it added to the scene.*

**Continued on Page 588**

*weather situation or the other and by 4 p.m. I would be creating sunshine with lights and I used to find myself running around kicking backsides everywhere shouting: 'Every minute counts!' The situation was further aggravated by the fact we knew that when we came back the next day the weather would have changed completely. For the Junior Horse Trial scenes, shot at Windsor, for example, the light meter was showing no light registration whatsoever. But with the super-speed Zeiss lenses, and knowing what the film could do, we just carried on and shot it. We used the Arriflex 35BL, which is very versatile, and it was amazing what we got away with. I was staggered myself sometimes. We shot the entire picture with the super-speed lenses and a five-to-one Cooke Varotal zoom.*

**QUESTION: Was that because of the nature of the film?**

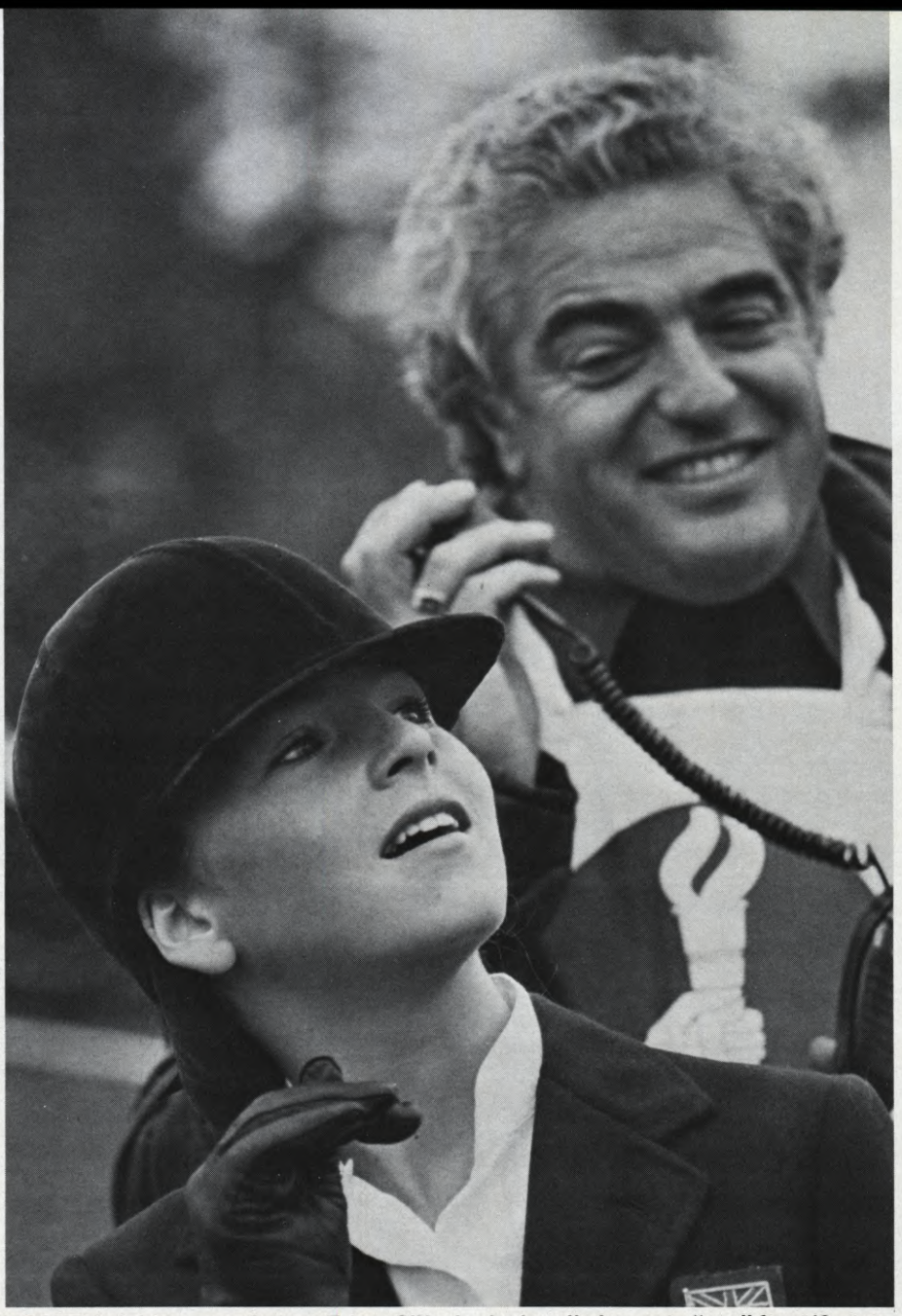
*IMI: Yes, like I said, we went prepared for the worst. The trouble is that many producers think the super-speed lenses are the answer to everything, that you can shoot in any conditions whatsoever. That's not so. You can get away with a lot of stuff you normally wouldn't, but your depth of field is very limited; you don't have any great sort of depth on the screen; you're very limited on one plane when you're shooting wide open. But it can get you out of trouble, as it did on those locations at Windsor.*

**QUESTION: The three days you spent in the United States shooting the Ledyard International Horse Trials were particularly rugged, we hear.**

*IMI: You can say that again. We were there three days and it poured with rain three days. In fact, the weather was so atrocious that Bryan made it a story point in the film . . . the British team are beaten at this event and Bryan has them returning to England like a bedraggled army retreating from Moscow.*

**QUESTION: There were nine camera crews covering the cross country event. What were the logistics on this?**

*IMI: To start with, this was a live event and, as such, wasn't one hundred percent under our control. Our brief from the Ledyard officials was to be as invisible as possible, to distract neither the riders nor the spectators. I was given nine East Coast camera crews and they were absolutely fantastic. We had a big meeting*



**(ABOVE) Imi draws a smile from Tatum O'Neal, who is called upon to "age" from 12-year-old to a poised 18-year-old on the brink of her first romance. (BELOW) Taking a meter reading, Imi doesn't look too pleased with the dull overcast. He had to ride herd on nine separate camera crews during filming of the cross-country event.**

*and Bryan explained to everyone what he was after in terms of the story, but it was down to me to coordinate the nuts and bolts requirements. The day before the meet we walked the course, five miles of it—I ended on my knees—and we spotted nine positions to locate the cranes, dollies and one cherry picker. Tony White, my operator, and an American focus-puller on the big Chapman crane worked with me covering the action showing Tatum and Tony Hopkins. The rest of the team were strategically placed around the course with a freedom to grab things as they happened.*

**QUESTION: With nine camera crews spread around five miles how did you maintain communication?**

*IMI: We had a fantastic American unit manager called Pete Runfolo who worked out a walkie-talkie system that wouldn't have disgraced Omaha Beach. When the light began to fade, for example, I would scream "Take the filters out!" through the system, but that apart, each crew was on its own and good old Denham Labs back in England got it all to match! Nine different lighting cameramen, each with his own ideas, but you'd never know.*

**QUESTION: There were some experiments made with special camera rigs for the riding sequences, we hear.**

*IMI: That's right. We had special rigs to sling under the belly of the horse, one for the rider to wear a camera on his head and another which went over his shoulder, or on his arms. But we never got to use them. It was intended that one of our riders, Richard Meade—the British triple Olympic gold medallist—should use the rigs, because he already had some experience with them from a documentary he had made. But when it came to doing it, the union stuntsman wouldn't let Richard do it because he said it was a union thing and the owner of the horse wouldn't let the stuntsman do it because he didn't trust him with the horse. So we never did do it, which was a source of great regret to me.*

**QUESTION: Do you—did you—like horses?**

*IMI: I can't stand them! They say they can sense fear and they certainly sensed mine throughout the whole picture. One snort and it was "pull for the shore boys." I'd always visualised them grazing in fields, in all sorts of weather. Like Christmas cards. I'd assumed the horses would do their bit and disappear. It wasn't like that. They had to be warmed up, cooled off, wound up, switched on. The horses were more temperamental than the actors and the horses' owners were more temperamental than the horses! Not that I blame them. These four-legged machines were absolutely priceless.*

**QUESTION: Having conquered your fears did you develop any special technique for filming horses in action?**

*IMI: Only the technique of making them appear fast—which they are. They gallop around twenty-five miles an hour, but getting an illusion of speed without undercranking—which looks awful—is something else again. A horse galloping is just a horse galloping and in wide angle it is a nothing shot. What we did whenever possible was to create a static foreground—spectators, trees, etc.—that we could pan through. The result was a sort of strobing foreground, which is extremely exciting to the eye. I was frequently at odds, too, with the technical advisers. I regarded the riding scenes purely as a cinematographic exercise; they regarded them with the purist eyes of equestrian experts and the two things didn't mix. For example, they were getting off on the dressage scenes, which they told me was like ballet. I didn't see that; I found it intensely boring, visually unexciting. So what Bryan and I would do was to break up the scenes into four different camera positions and imagine where the editor could cut, just to jazz it up a little. I went in with hand-held on several occasions. Riding gets enormous coverage on British television and I wanted to get away from the television type presentation.*

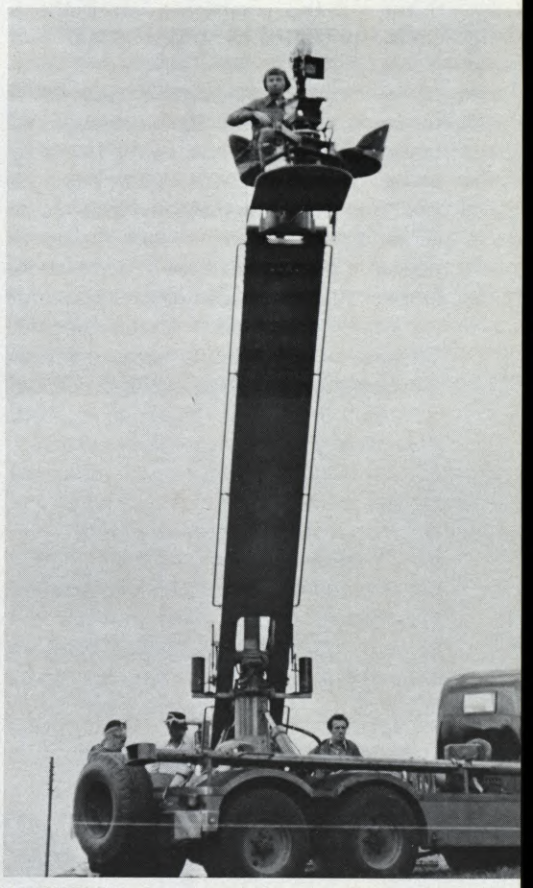
**QUESTION: Can you light horses like you light people?**

*IMI: Not always, and that's where I came unstuck one day, on a scene showing Nanette brushing Pie, the old Grand National winner from the earlier film. I completely underestimated the amount of light the animal would soak up and when we went to see rushes, there was Nanette brushing the empty air. The horse had virtually disappeared. In the end, one found you could light a horse to get some sort of character out of it, put a sort of kick on its coat to bring it to life.*

**QUESTION: One of the action highlights in the film shows three young guys in a car chasing Tatum on horseback across the countryside. This ends disastrously and is a truly terrifying piece of film. It looks as if the car is rarely more than a foot or two away from the rider. How was this done?**

*IMI: We used a variety of methods to make this a really exciting sequence. One was to mount the camera on the side of the car, shooting into the driver and the passengers, and the other was*

**Continued on Page 595**



**(ABOVE) Giant camera crane rears its head into the location sky. (BELOW) Using a tall ladder as stand-in for the crane, Forbes surveys possible high-angle shot inside the horse pavilion.**

Continued from Page 585

**QUESTION: I was interested in all the practical lighting effects you had in there; of course, the laboratory with all the spark machines and candles all over the set. I was wondering if forcing helped you with those effects—being able to keep a lower light level and bring out the practicals—or if there were any problems in doing that?**

*HIRSCHFELD: It's no problem actually. It did help, especially the sparking machine. Oh, I don't know. I think I worked on an average of about 75 foot candles, but I don't know exactly anymore—60 or 75. And usually a stop of four. You could note that there were a lot of wide angle lenses. I think the 25mm was used for probably 75 percent of the picture. Sometimes, if someone came close to the camera, you could actually see the distortion there. But I felt it all worked. Also, we used a zoom a number of times, but always in conjunction with a camera move. I really don't like a zoom when you use it as a straight move-in or move-out. It's an interesting thing—I don't know if you ever realized it—but in using a zoom, the camera never moves towards the subject. The subject is pulled towards the camera. Also, the perspective never changes. It's a very obvious, let's say, gimmick. But as soon as you can use a camera move in conjunction with it—not moving in or out, but if you're zooming in or out and you move the camera across or drop it down—it takes the onus off of the effect of a straight move in and out that a zoom lens gives you. There are some things that you really can do better with a zoom lens than with a camera move, just because of obstacles that might be in your path for a dolly or a crane movement.*

**COMMENT: It looks like you might have had some optical zooming done after the picture.**

*HIRSCHFELD: We did. These were done during the completion of the picture and it was obvious when you saw the grain size. Yes, I was a little surprised myself at some of that. But it helped the dramatics of the particular scenes.*

**SCHWARTZ: What they do in post production can shock you sometimes. There's a tremendous amount of latitude in printing. That's why sometimes, if the people want it, the cameraman will spend the time in the lab and get the print exactly the way he wants it. Otherwise, you could get a wild version from what you shot.**

*HIRSCHFELD: Well, I had done this. I saw a final cut with Mel Brooks and I went to the lab just for the timing of the picture to see how the scenes would match together. I mentioned certain things that I felt should go down darker. The editor is usually there at that time, because he kind of keeps notes. The laboratory timer is there, and he, of course, makes notes scene by scene. I found out after I left that Mel said, "Now print everything up four points." I was trying to get it down. The editor said, "Now wait a minute. You're going to make him very furious." "That's all right," he said. "He's a friend of mine." He said, "Up." So even some of the dark scenes there could be darker to really have that mood.*

**QUESTION: How did you do the shot of the moon? What was that, just a painting or a lit backdrop?**

*HIRSCHFELD: We had several in the picture. We had a backdrop that had a moon on it. I don't remember now. I don't think I backlit it, but I did put a spot on it to make it brighter. There was one shot with clouds I think, a closeup of the moon. That was artwork. The castle at the beginning was artwork. The long*

Continued on Page 602

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**BEHIND THE SCENES**
**Continued from Page 581**

dinary surfing action. Also appearing are such world class surfers as Ian Cairns, J. Riddle, and Billy Hamilton, who gave up almost a year of professional competition to be a part of "BIG WEDNESDAY".

The creative team assembled for the production includes cinematographer Bruce Surtees, who was nominated for an Academy Award for "LENNY", film editor Robert L. Wolfe, who cut "THE WIND AND THE LION" and was Oscar nominated for "ALL THE PRESIDENT'S MEN", and production designer Charles Rosen, whose credits include "TAXI DRIVER" and "THE PRODUCERS". Special surfing photography, the first of its type to be shot in 35 millimeter, was produced by Greg MacGillivray (who, with partner Jim Freeman, produced, directed and photographed "FIVE SUMMER STORIES", and the award-winning Imax epic, "TO FLY"), with water footage by George Greenough (who shot the spectacular surfing film "INNERMOST LIMITS OF PURE JOY"), and Dan Merkel (who did all of the water photography for "FREE RIDE", the most popular 16 millimeter surfing film ever made).

Buzz Feitshans, producer of "DILLINGER" and John Milius' partner in A-Team Productions, is the producer of BIG WEDNESDAY". Executive producers are Tamara Asseyev and Alex Rose.

"BIG WEDNESDAY" started shooting on July 11, 1977, with one week in El Paso, Texas, doubling for Tijuana, 1961. Moving back to Southern California, the company filmed for five weeks at various locations in Los Angeles County and then traveled to the Point Conception area north of Santa Barbara for additional beach and surfing sequences.

"BIG WEDNESDAY" is the most personal film that John Milius has ever made. It is his honest appraisal of a decade in transition, the 1960's seen from a surfer's point of view, and the challenges that can confront us all. ■


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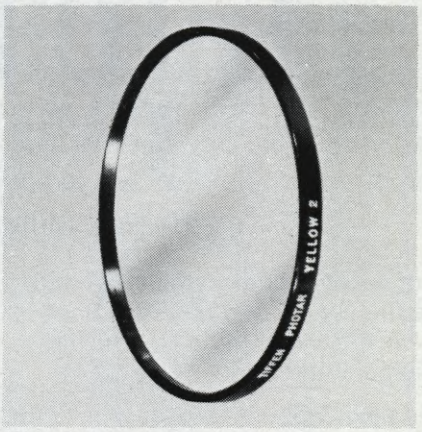


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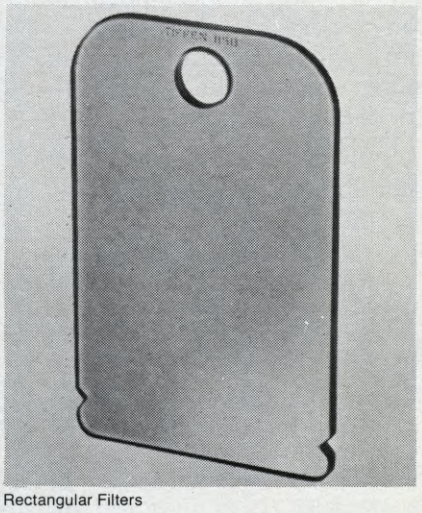

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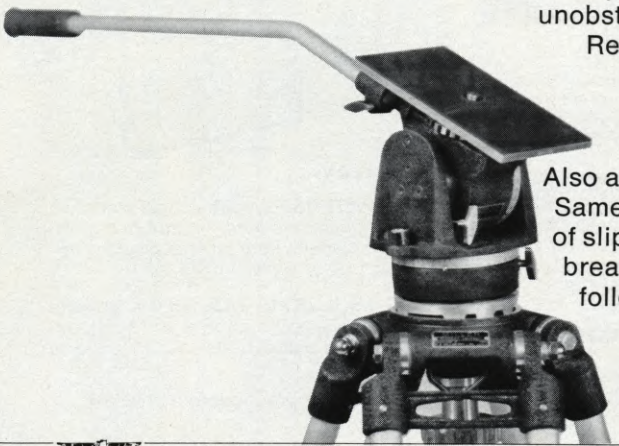

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*water, and they had a housing built for a standard Arriflex. But the problem with that housing was that it was very heavy. You had to hold the whole thing up in front of you to do dialogue scenes in the water and it required using a 75mm lens in order to pull the background of the waves up closer.*

**QUESTION: And that camera would run at what speed?**

*GREENOUGH: It would go from 24 to 80 frames. It was just a standard Arriflex. But the fourth camera I built was the most interesting of all. I got an Arriflex 2C camera, complete with magazines, motors and all the paraphernalia involved with a camera like that—and I completely reengineered it. I just literally took a hacksaw and sawed the side of the camera off. I took all of the optics out of the viewfinding system. What I wanted was a camera like a big newsreel camera that would balance on my shoulder, because to shoot dialogue scenes in the water would involve holding the thing up for a minute or two at a time. The basic idea was that I brought the viewfinder out of the side of the camera, instead of where it normally comes out the back. I built the viewfinding system out of aluminum and epoxy, which was all fibreglassed together, and this shifted the camera mass from in front of me over to the side. The camera is designed somewhat like a barbell inside. There are two large masses of weight—the camera head and the lens, and the motor and the batteries. These are mounted as far apart as possible in order to dampen the motion and eliminate jiggle when you hand-hold the camera. It is one of the best hand-held cameras I've ever operated. It's very, very steady when used in the water. I had wanted this to be a perfectly balanced camera, so that all I had to do was guide it with one hand and operate the focus with the other hand. The point is that it's very difficult to use an assistant to follow-focus in the water. It's okay when you are shooting a dialogue scene, but when you have to shoot surfing scenes and move around a lot it's very rough. It's hard for another person to hold onto the thing.*

**QUESTION: What are you sitting on in the water?**

*GREENOUGH: I shoot off an air mattress, which is about two-by-four-feet in size and four inches thick. Getting back to the camera—I disregarded the magazine and just used the basic camera*

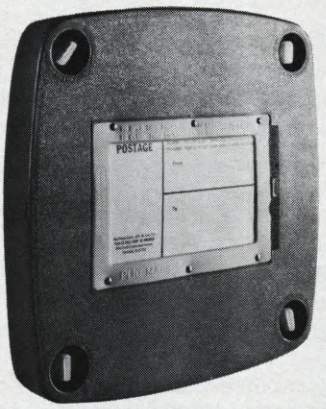
*head and split reels. I've brought the viewfinder off to the side, and where the motor normally goes below the camera or on the side with a flat plate, I've put a right-angle drive there and put the motor back over my shoulder. Below the motor are the batteries. I can use either 24-volt or 36-volt batteries. If I'm running high-speed, of course, I use the 36-volt batteries. Above the batteries is the feed spool and just in back of the original camera body is the take-up spool. On the feed spool I use a brake similar to that on a high-speed camera, because when I'm shooting at 80 frames, I can't speed it up with the rheostat. I just have to hit it bang!—and the camera takes off. Then I have to shut it off. That type of brake worked out very well. Basically, I built a light-tight housing out of epoxy, which is all that the camera mechanism is contained in. The housing is fairly long, but not very wide, and the balance is incredibly good on it. With your normal Panavision lenses the balance is perfect. If I'm using a 50mm-500mm zoom, it's a little front-heavy, but with your normal lenses up to 200mm you can guide the camera with one hand, which isn't supporting any of the weight. All of the weight rests on your shoulder. The other hand is free to operate the focus. This kind of filming requires an incredibly well-balanced camera, because you're out there with a 200mm lens, sitting on this air mattress, which isn't the steadiest thing in the world, shooting guys who are running 12-to-15-foot surf.*

**QUESTION: What are the dangers of sitting inside an impact zone with a camera that heavy?**

*GREENOUGH: Well, fortunately, I'm a very good surfer, so I have very good wave judgment. And, of course, one of the requisites of this camera was that it be incredibly strong against impact resistance, because when you're shooting in this large surf, you often get caught and the camera can go directly into the impact zone of a 15-foot wave and there's no way to pull it down. The camera is fairly buoyant—so buoyant, in fact, that when I did underwater shots with it, we had to put a sandbag or skin-diving weights on the bottom in order to sink it. Sometimes, in heavy surf, you just let your air mattress go and pull the camera through the top of the wave, and sometimes you just dump the whole lot. In fact, we found it easier, instead of trying to save the camera, to just let everything go when you get caught. It was easier to swim without the camera than with it, because you couldn't do anything with the camera without the air mat-*

**Continued on Page 601**

# "Frankly, my dear, I don't use a can."

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# SYNCING IN THE BERMUDA TRIANGLE

**Intrepid crew ventures into the dread "graveyard of missing ships, planes and men" to film an exciting adventure documentary—and live to shoot another day**

**By WILLIAM F. MILLER**

It was December, cold in Boston, and we were sitting around dreaming about how refreshing it would be to spend the rest of the winter in the Caribbean, or some other exotic, tropic paradise. We'd just finished a stint in the Cascade Mountains filming an adventure documentary about an expedition looking for the legendary creature, Bigfoot. That film, "IN SEARCH OF BIGFOOT", was nearing completion and we knew we needed something to occupy our vocational needs as filmmakers for the coming year.

Quite unexpectedly, we received a long distance call from a group in the Washington, D.C. area which was preparing an expedition into the unknown. They had heard of Bostonia Films through the psychic grapevine and knew of our specialty of taking cameras where others dared not go. Shortly into the conversation, it became apparent that they were planning an expedition into the Bermuda Triangle, which at that time, was just coming to the attention of the national press. The expedition they had planned left little to be desired. There would be scientists, researchers, psychics, oceanographers, divers . . . all aboard a luxury liner . . . . some 300 strong heading into the Graveyard of the Atlantic to challenge the devil. It sounded great. The expedition would be held and Bostonia would film it.

There was only one catch. The expedition never left port. There were many meetings, in New York, in Boston, in Washington, D.C. We were all set, cameras on stand-by, personnel waiting, film on order. But as the sailing date approached, it became more and more apparent that the trip was not to be. When word finally reached our production studios in Boston that the trip had been cancelled, for the fifteenth time—but this time for good—we were discouraged but not totally dejected. We'd spent time and money gearing up for the trip and had invested quite a lot of time researching the mystery surrounding the Bermuda Triangle, or the Graveyard of the Atlantic, as it had come to be known. We felt the project still deserved attention and we knew that no other expeditions had really ever investigated the area in search of scientific clues, clues which might unlock the mystery of the area where countless ships, planes and people have been lost.

Now the question became, could Bostonia Film Productions wear two hats? Could we organize our own expedition into the Triangle and at the same time produce a worthwhile motion picture? We were nervous about it, but we felt we could do it—provided that we could get the project financed, put together a team of scientists, researchers and psychics with unquestionable credentials, find a ship worthy of making the sail and a captain willing to take on the assignment and structure a voyage which would be scientifically plausible. Other than that, all that was left were the routine production chores which go with any film project.

## FINANCING

Getting the necessary monies for any motion picture project has never been an easy task. The main thing to remember is that the people are investing in *you* as much as in the project. We were not only after capital to produce the film, but also finances necessary to organize and conduct the voyage. It took a lot of talking, but finally one group was willing to put up the dollars necessary to get us down to the Triangle area, put us on a boat and equip us with the necessary scientific instruments and film equipment. Post production financing would have to wait until we got back. Anyway, it was a start.

## THE SHIP

Finding a ship to take us into the Triangle area presented more problems than finding financing. Dozens of calls were made to ship owners, charter groups and private individuals. We had scaled down the size of the group which would be going. We knew it was not feasible to put three hundred people on an ocean liner, which had been the goal of the original expedition leaders. Now we were interested in a ship which could carry about a dozen people. It had to be large enough to weather ocean storms and we wanted it to be equipped with both sails and auxilliary power. We wanted both options because of all the stories we'd investigated about the strange things that happen to ships in the Bermuda Triangle. If the winds failed, we could have the option of motoring out of danger. If the engines failed, we could sail. If both failed. . .

It was unbelievable how many captains and ship owners turned us down. Advance publicity about the Triangle was spreading rapidly and even though most seamen scoffed at the mysterious reports, the sailors weren't particularly interested in casting their fate to the wind. But we had found the money. Surely someone would be willing to sail us into the unknown. That somebody turned out to be a young British captain who was just starting a new career as a charter boat captain. He'd spent the last twenty years hauling cargo into remote areas of the South Pacific and this would just be another adventure. His ship, *The New Freedom,* seemed perfect. A 75-foot schooner seemed somewhat small for our needs, but its captain, Anthony Fincham, was the only one who would agree to make the voyage. Time was short so we signed aboard. The ship could safely handle fifteen people. Its crew numbered five, including the captain, so this limited to ten the number of people we could bring along.

## RESEARCHERS AND CAMERA CREW

We wanted our investigation of the Bermuda Triangle to be as thorough as possible, so this meant limiting the cam-

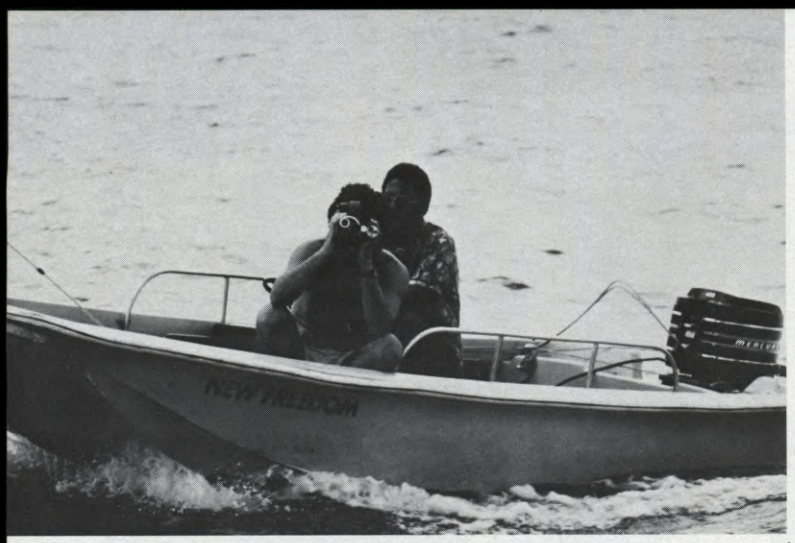
**Continued overleaf**

**For the Bostonia Film Productions four-man crew, shooting aboard ship was not a totally idyllic experience. Epidemic seasickness, sudden violent storms, oppressive heat and a curiously disorienting fatigue made them fight for their footage all the way—but the results on film were worth it.**

(ABOVE) *The New Freedom*, a 75-foot sailing schooner with auxiliary power, was the ship which bore the Bostonia film crew into the dread Bermuda Triangle. Many shipowners turned them down, but young British Captain Anthony Fincham seemed unperturbed.

(RIGHT) The many cases of filming and scientific equipment are off-loaded at Tortola, British Virgin Islands, after Puerto Rican layover. Each item was meticulously documented, but the local customs officials didn't even bother to open any of the cases.

(BELOW LEFT) Bikinied crew member backs up cameraman to keep him from falling overboard during filming—a distinct possibility. (RIGHT) Three-legged limpet mount, with Ronford head, held the camera securely for his over-the-side shot.



**(LEFT) Hand-held filming from a tiny outboard-driven boat, as it bounces over the waves, requires gyroscopic arms and a good deal of self-confidence. (RIGHT) Cramped quarters were the order of the day aboard ship—both for filming and living. With space extremely limited, the crew ended up literally living on top of the equipment cases, which covered the floor of the main cabin.**

era crew to as few people as possible. We decided on four people: two cameramen, a soundman and a production assistant for continuity, slating, assistant camera and general help.

That left six spaces for our research team, which consisted of two physicists, two psychics, an oceanographer and a diver. Our aim was to cover the Triangle below, above and beyond. It was quite a crew.

## CAMERA GEAR

During our last shoot in the Pacific Northwest chasing Bigfoot through the mountain ranges, we had equipped ourselves with Eclair ACL's and Nagra Sn's. They were perfect for the rugged forestlands because of their portability. But even in the wilderness areas we were only a three-hour drive from the airport, so any damaged or faulty equipment could be replaced by air freight. Going into the open waters of the Atlantic Ocean, we decided that every item we took had to have a backup, because we knew there would be no way to replace a camera, lens or battery out there. Our choice for cameras this time was two Eclair NPR's with spare crystal motors, a reflex Bolex, a Bell & Howell 70DR and two underwater cameras. Both the Bolex and the Bell & Howell were taken because they are spring-wound and we had heard too many stories of batteries being mysteriously drained in the Bermuda Triangle. If this happened, we still wanted to run the film through a camera, if only MOS.

For sound equipment, we brought along a Nagra with spare amps and a Tandberg for backup purposes. If the batteries in the tape recorder became useless, we brought along lots of pencils to take notes with. Not much else we could do.

Instead of battery belts, we chose Anton/Bauer battery packs because of their portability. Just in case, we brought along two dozen of them and a half dozen battery chargers. The power on the ship was limited. There was a 10,000-watt generator (220 volts because the ship was of British origin) and a 24-volt battery system. The ship's generator could only be on three hours a day because of the amount of fuel it consumed. For some reason, however, the generator was not operating properly and none of the battery chargers would work off of it, although they could handle 220 volts. We tried step down transformers to drop the voltage to 117 but this didn't work either. Luckily, we had packed an inverter which we had used in the mountains to charge our batteries off an automobile's electrical system. It had converted twelve volts to 117 volts. The ship's battery, although 24 volts, had a 12-volt tap on it which functioned well. It meant we could only charge four batteries at a time, but with two dozen camera batteries from which to choose, we were never without power. Unfortunately, we had to share this power source with the scientists who needed it to run their scientific instruments.

Lighting equipment did work off the generator at 220 volts. For backup, we brought along two Sun-Guns.

In all, we had some 60 cases of film equipment, film and scientific instruments. As you can imagine, storage space is limited on a 75-foot ship, so we ended up literally living on top of the equipment cases which covered the floor of the main cabin.

## HURRY UP AND WAIT

It had been six months since the project started rolling and now, with less than 48 hours to go before our plane was to leave, we still had not received the check to finance the trip. All was set, the money was there, but last-minute legal arrangements (which later would prove to be a fifty-page document) were still being made. Everyone was standing by. The ship's captain, eager to make the trip, was willing to wait out the last few hours. The scientists and researchers, coming from all across the United States, had standby reservations to Puerto Rico and, as far as we knew at the time, the equipment rental house in New York had all of our equipment on reserve. We knew that if the check didn't clear soon, time would run out. We were due to board the ship on Friday night and it was now 4:30 in the afternoon on Wednesday. Shoes were wearing thin pacing the floor.

Finally, the call came from our attorney. All was set. Long distance phone calls were placed to everyone concerned telling them it was a go. All was ready, except for one problem. The equipment rental house, which had not heard from us during the day (it was now after five o'clock) had released the equipment to someone else. *Panic.* We knew we needed to check out the gear the next day. Now we had no gear to check out. And it wasn't a simple matter of ordering a camera and tape recorder. At 5:32 we called Camera Mart in New York with fingers crossed that they might still be there. On the seventh ring, the phone was answered and we asked for Leo Rosenberg, rental manager. We had dealt with Camera Mart before, but we had not established credit for Bostonia Films. We explained the situation, went over the equipment list and found to our relief that Camera Mart could handle our long list.

We can't say enough about the help CM gave us putting the whole package together. We arrived at their doorstep the next morning at 8:30 and for the next six hours we checked cameras, lenses, microphones, wireless transmitters, and other odds and ends.

When leaving the country with camera equipment, it's essential to make cus-

**Continued on Page 614**

**"INTERNATIONAL VELVET"**
**Continued from Page 587**

*mounting the camera on the front and pointing at Tatum on the horse. We used 35mm 2C Arriflexes and the driver-actor became his own operator. Additionally, we had three cameras rolling on the scene for intercutting. For the close-ups I operated the 600mm camera myself, pulling focus as I went, grabbing the wheels, hooves, the horse's head, anything I could get.*

**QUESTION: Another scary scene is where one of the horses goes berserk as it is being transported by plane from England to the States. This was obviously done in the studio?**

*IMI: Yes, it was shot in a full-scale replica of a transporter fuselage designed by our art director, Keith Wilson. The whole length of it rolled on hydraulically controlled rockers, in a sort of cradle motion, and so much hardware was employed I found the only way to light the interior was from the outside. What I did was to make use of the cutouts which represented the plane's artificial lighting. I covered them with tracing paper and then placed Malham quartz lamps in big housings over them. We shot the whole thing wide open with the good old*

**Continued on Page 606**

**While Forbes checks shooting schedule against his watch, Imi supervises placement of Panaflex camera at water level of pond for what can accurately be called a "super-low" angle shot. Most of the film was shot on location, the rare studio sequence being that in which a horse goes berserk while being loaded onto an aircraft.**

---

*ABOUT THE CINEMATOGRAPHER:*

*London-born Tony Imi, BSC is a practical artist with a practical approach to cinematography which has made him one of the busiest of the "new breed" of lighting cameramen in Britain today—particularly for films where it's known that the going will be rough. Appropriately, the road to the camera room at the top was not easy.*

*"My family," he says, "were cinema fanatics and we would go to the movies three or four times a week. I was excited by what I saw and though I didn't know who was responsible for what went onto the screen—I always walked in or out during the credits—I knew I wanted to do it. When I left school I pounded on the doors of Wardour Street (London's film centre). Invariably I was thrown out, sometimes nicely, sometimes not, but nonetheless thrown out, and told to get experience or a union ticket. Preferably both.*

*"So I joined the negative department of Fox Photos—the big photo-news agency—and attended film school in the evenings. I joined this particular film school because I found out that they had a 16mm camera. While the local Woolworths manager was grooving with the local bank manager over the comparative merits of Eisenstein and Pudovkin, I got my hands on the camera and went out into the streets—shooting things.*

*"Eventually I went to BBC Television as a trainee projectionist—handling rushes, splicing rushes, projecting rushes, seeing sequences come together and turn into a story. After nine months I decided I knew all there was to know and applied for a job as a trainee cameraman. I was told to report to the BBC Film School on a Monday morning, but it never happened, because when I arrived home that night there was another message from the BBC, a telegram ordering me up to Scotland to start work on a show they were making there. I was to be third assistant cameraman, a sort of glorified loader.*

*"I never did see the inside of a classroom. Instead I worked with a variety of cameramen, shooting current affairs, drama, sport, religious programmes, school programmes. I went through the whole system.*

*"In those days you shot everything on 35mm for television using the BNC Mitchell camera, and then the BBC, in its wisdom, developed an apparatus they called the double-camera which was really no more than a Cameflex camera mounted side by side with an Eclair sound system. It was like lugging an elephant around. With huge effort—it really was an immense camera—we used to go around the country, just two of us, doing all sorts of programmes.*

*"Some time later I had the good fortune to work for a lighting cameraman who liked to disappear into the nearest pub towards the end of each morning and he allowed me to light, operate, focus-pull, load—the lot. I was made 'acting cameraman' and one of my first assignments was the BBC television film 'UP THE JUNCTION' with Carole White and this won all sorts of awards. Then they made me a full cameraman and I did the play 'CATHY COME HOME', again with Carole, and most of the Wednesday plays from that period. Then I left, to start my first feature film."*

*Imi's introduction to the big screen was not auspicious.*

*"I met the producer," he recalls, "who said 'Hello, Tony. There are two sides to this movie, mine and the director's. Whose side are you going to be on?'. I said I hadn't realised it was going to be a football match—which I thought not bad for the spur of the moment—and added that I was on the film's side. This, apparently was the wrong answer, because things got so bad that five weeks later I asked to leave the film and they agreed—and that was the start of my dazzling new career. I thought that was it."*

*Help, however, was on hand in the shape of producer-director-writer Bryan Forbes. In addition to photographing such features as "THE RAGING MOON" ("LONG AGO TOMORROW" in the United States) and "THE SLIPPER AND THE ROSE"—both for Forbes—Imi appears involuntarily to have cornered the market in films dealing with human movement.*

*There was the movement of Rudolph Nureyev in "I AM A DANCER" and the gyrations of Elton John in a filmed profile of the singer on both of which he shared the cinematography credits, and the movement of lovemaking in EMI's highly acclaimed educational feature "THE BODY" ("the camera crew stripped for that one so that the protagonists would feel less conspicuous") and inevitably he was chosen to photograph the swimming events for the official film of the Mexico City Olympic Games.*

*For much of the last year he was filming movement of another kind—the movement of horses for MGM's "INTERNATIONAL VELVET"* ■

# BEACH AND JUNGLE FILMING IN MALAYSIA

**By PAUL ONORATO**
*Director of Photography*

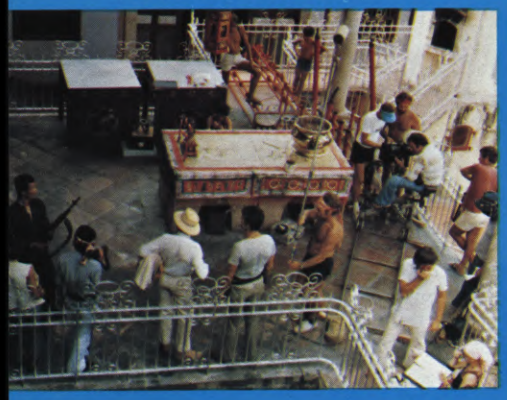
**Tropical climate and terrain present some interesting challenges to Australian cinematographer during the filming of a children's series**

When I was first approached by John McCallum Productions Pty. Ltd., in Sydney in connection with their forthcoming series in Penang, I was intrigued with the challenge of the project, particularly in view of the harsh light in that part of Asia, and the comparatively small amount of lighting equipment that would be available to me.

Unfortunately, due to my late engagement, I did not have the benefit of involvement in the early location surveys, but after accepting the booking, I set about reacquainting myself with the problems of shooting film in Asia. My apprehensions were eased somewhat by the fact that one of my favourite Australian Gaffers, Derek Jones, with whom I work regularly, was to be available. Our biggest problem in the lighting area would be that there were no suitable generators available locally, and the budget would not stretch for shipping one, particularly in view of the possibility of delays with the local Customs authorities so close to the date of commencement of shooting.

Prior to my engagement, the Production Department had made the decision to make up a battery pack locally as a generator substitute. I was a little worried, even though I had shot series with batteries before, simply because we would almost never have the option of running off constant power, even if we wanted to. The nature of our locations

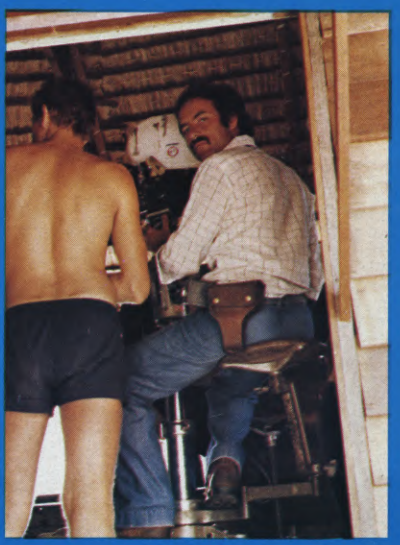
**(LEFT) The Elemack dolly is used for a tracking shot outside a Buddhist temple in Penang. (CENTER) A Mini-Brute, run off a battery pack power supply, is used to provide booster light. (RIGHT) Director of Photography Paul Onorato operating Arriflex 16BL camera, with assistant in foreground and director Simon Wincer watching.**



**(LEFT) Lights are set to shoot scene involving a unique and colorful form of man-powered transportation. (CENTER) The amphibian, Mallard, at anchor. The plane was 29 years old and in immaculate condition. It carried full instrumentation and radar. (RIGHT) A walking dialogue shot. Gaffer Derek Jones follows with a hand-held Mini-Brute.**

**(LEFT) An Australian-made crane arm was used on the Elemack. (CENTER) A small pick-up truck is used to simulate running shot of actors on a motor scooter. The low camera angle aiding in creating the illusion. (RIGHT) Onorato had used the Arriflex 16BL in filming several television series and had found it to be very realiable. Nevertheless, he brought an extra one along as back-up.**

**(LEFT) Local crew members help weight the crane arm on the Elemack dolly. (CENTER) The Mallard at Penang Airport. Cabin interiors were simulated in this way, prior to mock-up being built. (RIGHT) Gaffer Derek Jones again doing great things with a hand-held Mini-Brute. (BELOW LEFT) Dolly tracks had to be laid in some tight places. (CENTER) Australian actor Mark Lee and Malaysian actors rehearsing scene. (RIGHT) The Elemack was often used, even in the more cramped areas of the beach house.**



would force us into an almost total dependence on the batteries, even for the most complex interiors. I did wonder also if the batteries and the small amount of Mini-Brutes that we would be able to run would be sufficient to fill our exteriors in this tropical climate.

One of the first problems we faced with the battery pack, which had been mounted in a trailer, was that there was some legal problem with towing such a trailer. The solution was to mount the batteries in a small Kombi Van. This we did and the end result was a very mobile and neat package.

The secret to successful battery use is simply to cut down the amount of running time of the lights. This really is important, and means that you cannot run lights out of actual shooting time, except, of course, for quick lighting walk throughs and the minimum number of rehearsals. This can be very worrying, particularly in the case of balancing complex interiors to exterior fluctuating light. In the case of this production, my task was made heavier by the fact that I was also operating the camera, since we had only a small camera crew. Because one sees the lights on for such a short time in this situation, the visual judgment a cameraman relies on so much, must to a certain extent be mistrusted, since your eyes never get a chance to adjust to the light level on set, and you simply have to place more than usual faith in what your meter says. I was glad to be using Eastman Color II rather than a reversal stock.

My choice of camera equipment was Arriflex. I have shot several 16mm series, and find the 16BL to be very reliable in these situations. Even so, I did suggest that we duplicate everything, since we would be working in conditions that are hard on camera equipment, and help would be a long way and much customs paper work away. Our final complement of camera gear comprised two Arriflex 16BL's, two new Angenieux 12-120mm lenses, an Angenieux 25-250mm lens with adaptor, a set of Schneider fixed lenses. The 16mm and 25mm lenses were super-speeds and these later proved invaluable. We also carried an 8mm Zeiss lens, a standard lens blimp, three crystal lock units, six batteries, several of each lead, two viewfinders per camera, two Universal fluid heads and all the normal legs, an Elemack dolly with 100 feet of straight and curved track and a crane arm.

We had our problems with the camera gear, and almost from the start of shooting our decision to duplicate anything that could be a likely source of trouble began to pay off. For some strange reason we repeatedly blew crystal units. I realise these can always be a source of trouble, but possibly as a result of sustained use in this steamy climate, they kept failing. It seemed to matter little which brand of crystal lock we used; the story was the same.

The next problem, as expected, came from the zoom lenses. These had been checked and set by John Barry Service Department in Sydney, but since it was winter in Sydney and very much summer in Penang, shifts occurred in back focus adjustment, distance scales and internal tolerances. The only answer to this problem was to keep constant critical watch to determine any deterioration and promptly send the defective lens with camera back to Sydney. Whenever this occurred it usually meant a week could go by without a back-up camera. We did

**(ABOVE) Director of Photography Onorato watches rehearsal aboard a boat prior to making a take. (BELOW) German actor Holger Hagen and Australian actress Angela Punch inside beach house. Note proximity to jetty built for sea plane. Balancing interior light with harsh exterior sunlight in scenes like this using limited number of Mini-Brutes was a continuing challenge.**

have an Arri ST for rig shots and occasional second unit pickups, but it was hardly suitable as a first camera. Needless to say we worried a lot until the second BL was back in our hands.

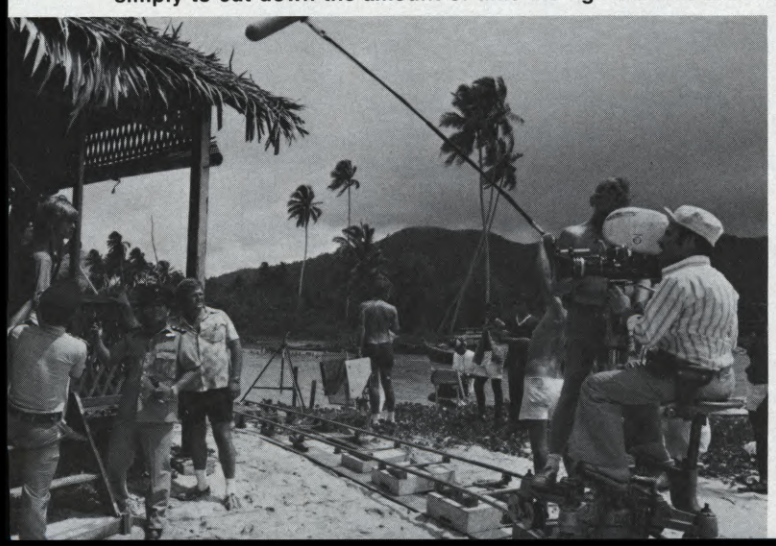
Most of our delays in this area related to customs difficulties. We initially tested cameras returning from service, but since there were no local processing facilities, we had to send these tests to Australia and the delays incurred when they arrived back in Malaysia eventually forced us to curtail these tests, since we often had to press the subject camera into service prior to seeing the results. I found all we could do was set up a test chart and carry out what visual checks were possible and hope all was well. Fortunately, there were not too many problems as a result.

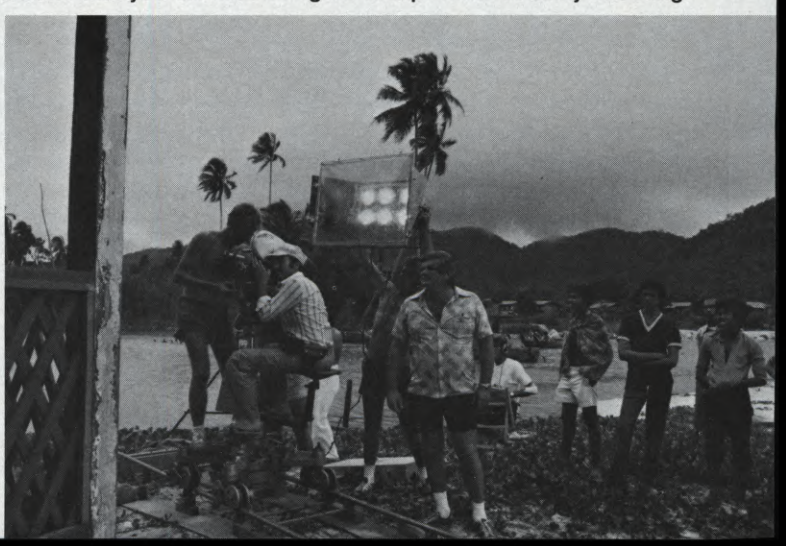
We saw no dailies during our stay in Penang, the problems of getting work print and sound magnetic back into the country proved too difficult. Selected takes, and later only rough-cut episodes, were transferred to Sony cassettes and we viewed them on our own machine. This system is fine, but not really adequate from a cameraman's point of view. I tended to rely more on our laboratory and post production department for reports.

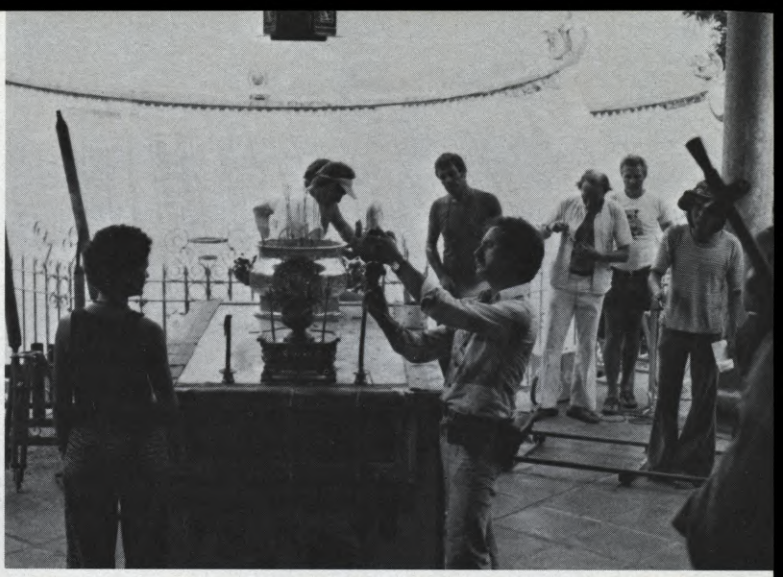
The processing laboratory was Atlab in Sydney and processing was handled by the night shift and viewed to check for any possible problems by our lab contact as early as 4 am. We would have known very quickly if there was a problem. Fortunately, I never got a phone call from the lab to advise us of a problem. I would have liked to have seen dailies, since the constant hot skies and small amount of lighting gear often meant I was exceeding top dead white by more than I would normally, and over larger background areas than I would normally.

I was often grateful for my gaffer's skill and willingness to get the absolute maximum from our small 6-light Mini-Brutes. So, many times, as on other productions,

**(LEFT) Fluctuating daylight created matching problems. Reflectors were carried at all times, but the white haze blocking the sun in the Penang area often made them ineffective. (RIGHT) A 6-light Mini-Brute powered by a battery pack. The secret of successful battery use is simply to cut down the amount of time the lights are in use. This means that you cannot run lights except when actually shooting.**







**(LEFT) One of the permanent locations was a small hut built by the water. Here director Howard Rubie and cinematographer Onorato (in background) watch rehearsal of a scene taking place on the porch of the hut. (RIGHT) Gauzy netting helped soften the light for this exterior-interior scene. Onorato prefers netting to the use of ND filters and their accompanying reflection problems.**

he would walk with artists, carrying a Mini-Brute, and accurately hit marks, making correct density assessments related to actors' positions. This sounds easy, of course, but those lamps are heavy, and not really intended to be used that way. Without his help, four 6-lights could hardly have been considered sufficient to tackle this kind of project, in this part of the world.

Naturally, we carried reflectors and used them when we could, but the light around Penang is so changeable, and there is so often a white haze which softens the sun, but has the negative effect of deadening the reflectors and hiding the horizon. The light level however, remains high. The effect is a bit like a smoggy day in California, but without the decrease in colour temperature and light level. When the sky is clear, the sun is straight overhead at midday, and this meant we had to deploy scrims for the closeups whenever possible.

For the interiors I tried to use as much natural light as possible, but this, of course, meant that we were still, to some extent, tied to the fluctuating daylight, even inside. Naturally, my reason for doing this was simply that we had so little power to light large areas, and I could not bring myself to shut the available daylight out. The good thing about shooting interiors this way, however, is the beautiful soft look one can get, particularly from sun bouncing off sandy beaches.

One of our permanent locations was a small hut built by the water. Balancing interior to exterior in this situation, predictably, became a nightmare, and I opted to hold it in control by netting, to varying degrees, the windows that were in shot, and leaving the others open to let in the light. I like this treatment for windows, since you do not have to battle with ND gel and the resulting reflection problems, and the exteriors can be given an interesting un-16mm-like lack of background sharpness. Exposure balance, of course, is important, since the gauze or net must not become visible. The only fresnel lights I used were Inkies and Babies, usually for night sequences, and all other lights were of the Ianiro and Mole Quartz variety.

On a couple of episodes, scripts called for sequences which took place in dense jungle. These scenes posed new problems, since tropical undergrowth allows almost no light to penetrate to the ground, and even if we had had large lighting units they would have been useless against the dense foliage. I found myself instead using the super-speeds and filling with Sun-Guns to around 15-20 foot candles. These small battery lights at this light level covered a surprising area. I decided not to force process, since I believe it to be unwise for this kind of project with 16mm Eastman Color.

In retrospect one of the most amusing problems we had to face in the early part of the production was to find a satisfactory way of shooting our seaplane taking off and landing. I had worked extensively with normal fixed-wing aircraft and helicopters, but had never tackled the difficulties peculiar to seaplanes. There are just so many variables that affect touch-down and lift-off points. Apart from wind direction and speed, other problems that have to be faced from a pilot's point of view are possible hidden obstructions, waves and swells which travel with the wind, making it necessary to land or take off into them. If the swell is too great, the only choice is to take off down wind, making this manoeuvre more dangerous and also making the lift-off point harder to predict, which makes it harder to shoot. The hull must be brought up to a planing attitude over the water by sheer power, and then the aircraft must literally be forced out of the water by quite violent action on the air surface controls. Sometimes small waves facilitate the final lift off.

Needless to say, we burned up plenty of film before we established a workable

**Continued on Page 582**

**The scenes which took place in dense jungle posed special problems, since tropical undergrowth allows almost no light to penetrate to the ground. Since force-processing had been ruled out, the only practical alternative was to use super-speed lenses with the few lights available.**

(ABOVE LEFT) George Greenough wades into the surf with shoulder-balanced, waterproof Arriflex which he designed and rebuilt for "BIG WEDNESDAY". (RIGHT) He tests the camera on dry land during early stages of its development. (BELOW LEFT) Greenough films Gerry Lopez and Jan-Michael Vincent with his unique camera. (RIGHT) Greenough completely reworked the standard Arriflex 2C camera, with viewfinder on the side (instead of in back) and weight of components redistributed to afford perfect balance for hand-holding.

(ABOVE) Greenough films Jan-Michael Vincent at Cojo Point. (RIGHT) What Greenough and his camera lens see as they "shoot the tube" at sunrise. A legendary surfer, he speeds through the hollow wave with the camera strapped to his back or chest to record dazzling point-of-view scenes.

(LEFT) One of the three instrumentation Eyemo cameras which Greenough adapted to "ride" surfboards. The miniature motorized 100-foot-load 35mm camera shot at 60 frames per second. This photograph shows the trigger on the surfboard rail and the 14.5mm flat wide-angle lens. (RIGHT) The camera in action. It was designed to film the surfer's feet or face while surfing or paddling. (Photographs for "BIG WEDNESDAY" articles courtesy of Dan Merkel, Surfing Magazine and Warner Bros.)

Continued from Page 591

*tress. We had lifeguards who would retrieve both.*

**QUESTION: How close could you focus with the camera?**

*GREENOUGH: I could focus down to about seven feet. I used two different types of follow-focusing on the camera. I used a gear drive with all the prime lenses up to 75mm. With the 100mm and 200mm the end of the camera would rotate. When I designed the housing I had a flat plate on the front onto which I built fronts for various lenses. The third part that I had to machine—which was the most difficult—was the part to be used with the 50mm-500mm zoom. This was machined out of a piece of half-inch-thick aluminum pipe, and it contains five O-rings and two handles. I removed all the electrical stuff and motors from the zoom lens. I had Panavision strip all of that off and they gave me just the basic lens, which I mounted. There were two levers coming out—one to the focus ring and the other to the aperture ring.*

**QUESTION: What material did you say the water-tight body is made of?**

*GREENOUGH: It's a special type of epoxy resin. You'd have to go to the manufacturer in order to find out exactly what it is. I just called this plastics company on the phone and they sent me the material. It's black in color (in order to be light-tight) and I used a military specification-type fibreglas cloth, which is quite expensive and hard to get, but it's much stronger than what you can normally obtain. The housing is fairly large and it has to be very strong against impact resistance. I went over the falls one time and went straight into a reef with it. I had the camera below me, so I landed on top of it as the camera landed on the reef. It didn't do any damage to it except scratch it.*

**QUESTION: What are some of the variables involved in getting really good surfing footage?**

*GREENOUGH: Well, there are a lot of variables. You've got problems with water droplets on the front of the camera, for one thing. I used tempered 1/4-inch optical glass on the front of the camera and I used a wetted surface, but when the wind would blow very hard across the front, it would cause a weird type of distortion. Half of the picture would go out of focus, and it took us a while to figure out what was causing this. I finally put a wind shade on it, which helped some, but we still had the problem on really windy days.*

**A rather casually assembled *mélange* of parts for the three Eyemo instrumentation cameras which Greenough assembled for filming on "BIG WEDNESDAY. With three cameras available, he had an assistant loading on the beach and a lifeguard swimming cameras in and out to him. In this way, he could keep on shooting without having to go ashore.**

**QUESTION: What was the wind shade made out of?**

*GREENOUGH: Just a big piece of rubber. It was made out of the lining used in a truck tire.*

**QUESTION: How did the camera work when you were shooting sync in the water?**

*GREENOUGH: It worked fine. We never had any problem with the camera. The major problem was with the waterproof microphones. They had a lot of problems with the sound all the way through—especially the wireless microphones mounted on the surfboards. I'm used to working with waterproof cameras, but the microphone people weren't and half the time the microphones leaked, so that the sound would break down. As for the camera, it functioned fine all during the time that we used it, even though I built it on a real crash program. I had only six weeks to build the thing before we had to start using it. What I wanted to do originally was mount a small recorder on the side of the camera, with a boom out front to hold the microphone. We would have had the whole thing in a single self-contained unit and that would have eliminated the sound problem. Either that or have someone build a really good water-tight housing for the Nagra and have someone out there with a Nagra boom.*

**QUESTION: What is your next film project going to be?**

*GREENOUGH: I'm presently working on a 16mm surfing film called "FANTASY". My main job will be shooting point-of-view photography—that and coming up with some totally mad ideas on film. That's the main problem with surfing films—coming up with something different.* ■

Continued from Page 588

*shot of the castle was all artwork. I never saw that until I saw the picture put together.*

**QUESTION: Where did you go to do most of it? Were you just basically around town on the ranches?**

*HIRSCHFELD: For what?*

**RESPONSE: The exteriors.**

*HIRSCHFELD: That was MGM's back lot. They have a permanent European street there. It's just redressed to make it look like whatever era you want it to be.*

**SCHWARTZ: Is that set still there?**

*HIRSCHFELD: I think so. It's been several years since we did "YOUNG FRANKENSTEIN". The forest was on a stage. That was built specifically for the picture. One of the big problems in shooting outdoors—and especially out here where you get a little breeze at night—is working those fog machines. If you get a little wind, it's just murder on the special effects department, because they can't make that stuff stay there.*

**SCHWARTZ: Did they use a lot of dry ice?**

**A mad moment in "THE WORLD'S GREATEST LOVER".**

*HIRSCHFELD: Yes.*

**QUESTION: Since most of the studios are geared for color as opposed to black and white, do you use the same bulbs, like tungsten bulbs?**

*HIRSCHFELD: At the time that there was a transition from black and white to color, black and white motion picture bulbs were of a lower Kelvin. They were about 2350 or 3000. Then when color came in, color film was set at 3200; except that some of the early Kodachrome was 3400. So they had all sorts of bulbs on the stage. During the time when color was coming in, you would have a problem because they would forget to change some bulbs. I would make little wagers with the gaffer. I would say, "I bet you a quarter that's the wrong color bulb." And you'd collect a few dollars here and there. Now, for instance, when you're shooting black and white, you're using color bulbs. The only difference is that the color temperature is a little higher, so you've got a little more exposure value from the lamp itself.*

**QUESTION: Do you use your Spectra meter?**

*HIRSCHFELD: Yes. I don't use any color temperature meter even when I'm shooting color film. If I know my keylight and my main lights are the right color temperature, well, anything that's really off from that, you can't see. I'll even work with dimmers in color work. I'll know the light's going red, but if it's the effect I want it doesn't matter. Take this room in here. You've got different colors of light in here right now. You've got one color*

Continued on Page 617

**On location in Belgium for "SUMMER WISHES, WINTER DREAMS".**

**COLOR INTERMEDIATE II**
**Continued from Page 571**

*Because you're working negative-to-negative, wet-gate should be used for both heads to minimize dirt.*

**Q: I thought that it wasn't possible to use a wet-gate on the printer head.**

*Y: Some optical houses claim this. However, it is entirely practical as long as you refocus the head to account for the wet-gate. An advantage of the wet-gate in the printer head is that if you have a rolling or conformed title–thus, a lot of film rolling through the printer–the wet-gate will eliminate the dirt and scratches.*

**Q: Is wet-gate needed for fixed titles?**

*Y: No. The cleanest frame can be chosen and frozen in the printer.*

**Q: You feel that negative titles are simpler to print?**

*Y: Certainly. The master positive is printed onto the dupe negative. The film is then rewound, and is reexposed to the titles which are burned into the negative.*

**Q: Because the titles printed onto 7243 are done in two passes through the printer, rather than simultaneously as with CRI titles, is the printer head used for both?**

*Y: Yes, and this can mean slightly better sharpness, even though two generations are used instead of one with CRI. That is why it's wrong to draw generalizations. You can't say that CRI is sharper and less expensive than 7243.*

*Usually, even we can't tell the difference in sharpness between the two. We have to check for the black film edges to determine which is the reversal negative. As for expense, titles made on 7243 can be 40 percent less costly than the same titles produced on CRI negatives.*

**Q: How critical is the burn-in exposure for the 7243 titles?**

*Y: Well, if white letters–the most common title–are used, you want to be sure the title is "white" enough. Enough light has to reach the film to go through all the layers exposed by the live action footage. But excessive exposure can cause the titles to "bleed." This can be a problem with fancy lettering–smaller than normal open spaces in letters such as "d" or "p." Good title design goes a long way toward eliminating potential problems. But generally speaking, exposure of negative titles onto 7243 intermediate*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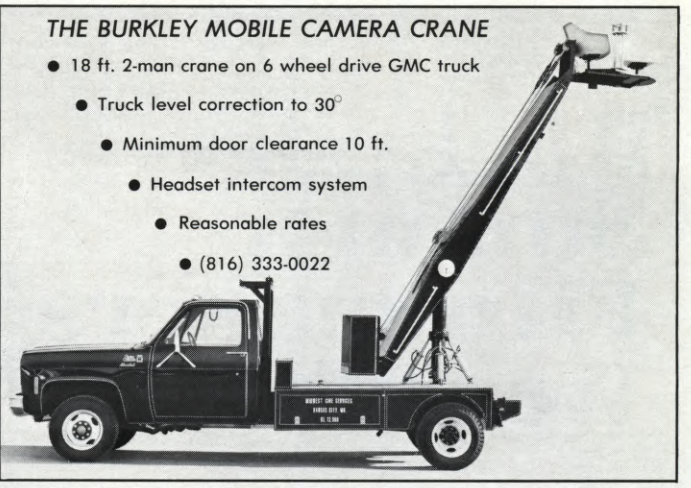

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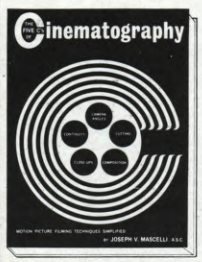


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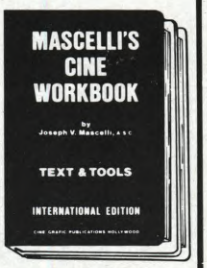


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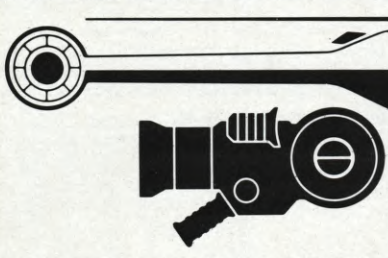

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*film is not as critical as with positive titles.*

**Q: I've heard you can do more corrections with 7243 than with CRI.**

*Y: That's not true. Corrections can be somewhat less critical. If a density problem isn't fully corrected in the first intermediate, it can often be fixed when the dupe negative is made. But it's a fallacy to think that you have two chances to repair a bad original negative.*

*During our seminar tour, we heard the following true story. A filmmaker whose original 16mm 7247 negative had gotten scratched was told by a well-meaning lab manager to use 7243 rather than CRI. "You'll have two wet-gate steps instead of one to try and eliminate the scratches." The intentions were good, but the advice useless. No intermediate method can save a really bad original.*

**Q: Do I need to expose in my camera any differently for 7243?**

*Y: No. Try to produce the best original negative possible. That's the key to good release prints.*

**Q: What do you see as the future of CRI and 7243?**

*Y: Both will continue to be used. Sometimes filmmakers attending our seminars feel disappointed because we don't make a strong case for one intermediate method or other. I don't feel that is our function. We show split-screen prints made from all possible combinations of 7247 and CRI and 7243, printed optically and by contact so viewers can decide for themselves. Some filmmakers prefer CRIs, and others like 7243 intermediates. Personally, I've never viewed release prints made from different intermediates that were so close in quality.*

**Q: Just how are your comparisons made?**

*Y: First, we exposed test footage of targets and models, and printed intermediate negatives on Eastman color reversal intermediate film 7249, both optically and by contact.*

*We also made optical and contact master positives on 7243, and printed the optical master positive both optically and by contact onto 7243 for a dupe negative. The contact master positive was printed by contact to produce an additional dupe negative—this gave us five negatives in all.*

*These negatives were used in a split-gate printer to produce positive color prints that were exposed by one nega-*

*tive on the right side, and by a different negative on the left side. By projecting this print, viewers can make a direct comparison of the quality of a release print made from the same original negative through different intermediate methods.*

*We also took a television film we had produced the titles for and repeated the process using that footage. That gave filmmakers an idea of how the different methods affected actual production footage.*

**Q: Was that an effective test?**

*Y: There was some overlap of images, so a black line ran down the center of the screen, clearly showing where one type of intermediate was used, and where another was. From time to time, characters would walk from one side of the scene to the other. Or, in one scene, the camera panned over the faces of a jury. It was a good comparison.*

**Q: So participants in your seminars were able to judge for themselves which intermediate system they preferred?**

*Y: Yes. It's the lab's job to gain expertise in the whole range of techniques and processes that might be needed by its customers. The lab can offer advice when it's requested. But the filmmaker or producer must decide in the end.*

**Q: What about the 35mm filmmaker?**

*Y: As I said, most 35mm filmmakers have long been familiar with the 5253/5243 method. However, Eastman Kodak Company has a good 35mm comparison reel. We recommend that interested filmmakers get in touch with their local Kodak office to view that reel.* ■


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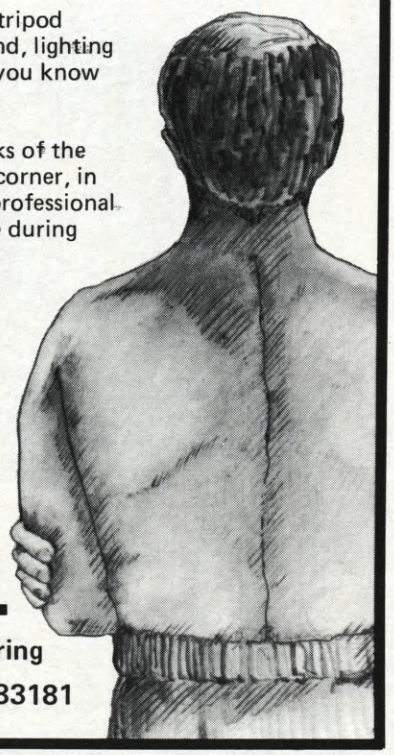

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**"INTERNATIONAL VELVET"
Continued from Page 595**

*super-speed lenses and the result was a soft, diffused look which contrasted beautifully with the terror of the scene.*

**QUESTION: Some cameramen say they find studio work more exciting than locations. Do you?**

*IMI: No, but I understand what they mean. They like to create something from nothing, taking a light source from a window, for example, developing it into a total mood. I prefer locations where you improvise and make the best of the situation as it is. However, I do welcome the opportunity to experiment that studio work gives you and I thank Bryan for that.*

**QUESTION: How's that?**

*IMI: Well, don't forget most of my background was location work for television and it wasn't until I met Bryan that I did much studio interior stuff. A high percentage of "THE SLIPPER AND THE ROSE" was shot in the studio and on "VELVET" he allowed me total freedom to experiment.*

**QUESTION: For example?**

*IMI: Well, when we created the interiors of the Devon cottage in the studio, for example, we decided we wanted ceilings on every room of the complex. That's not common practice—at least, it isn't in this country. Not only does this create complete reality, but it also automatically takes care of that other headache when you shoot in wide-screen and that is that the film will eventually be sold to television where it's taboo to have those black bars top and bottom. I would say that on 99 per cent of the films shot these days you always frame for television. What you're doing, in fact, is to shoot and light areas which the cinema wide-screen will never see, but are in full view when the movie is shown in full Academy format. I've seen films projected this way and you see the lights, mike boom, everything. And, you know, there's no guarantee that some cinema in the back of nowhere is going to frame it as you shot it. Personally, I'd prefer to see a 1.66 hard mask put in the camera gate and you frame for the cinema, the medium for which it was made. But no, all films now, apart from anamorphic, are shot with television in mind.*

**QUESTION: You were quoted somewhere as saying that ideally all directors would also like to be the cameraman. Is the reverse true, do**

**most cameramen want to be directors?**

*IMI: Maybe they do, but, with notable exceptions, few have ever made it with any success and my personal explanation for this is that we have too narrow a mind as to what is going on. We too often see things shot-for-shot, scene-for-scene, rather than encompassing the whole project–the music, cutting, dubbing, effects. Nine times out of ten as a cameraman all you're worried about is the light matching, the actors hitting their marks, whether you've got the right filter, the right lens, the right lamp, whether the focus-puller's got it sharp, the loader hasn't put in the old film and double exposed it. One dreams, of course, but basically I think I enjoy what I am doing too much to want to change . . . if someone asked me to shoot a piece of string I'd do it.*

**QUESTION: Do you have heroes?**

*IMI: Of course. Many of the names that never registered when I was a kid and I only found them out later. Joseph Ruttenberg was one and, oddly, one of my most prized possessions is a letter from Ruttenberg which came out of the blue and in which he said how much he liked my work in "THE SLIPPER AND THE ROSE". Gregg Toland, James Wong Howe, all those great names. Whatever we do today they had already done. Perhaps we do it differently, using different techniques, different facilities, but we're really only following in their footsteps. . .* ■


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JOHN MILIUS "HANGS TEN"
Continued from Page 572

*now on. We work from the beginning of the script so that by the time the film is photographed I know the kind of music that will accompany a particular scene. I think on the next movie I'm going to have Basil actually do some recording before we shoot and I'll play it during the scene so the cameramen and actors can hear it.*

**MAC GILLIVRAY: The sound effects in surfing are especially important. Huge waves make noises that are terrifying. How are you recreating these sounds of waves and surfboards?**

*MILIUS: In big waves there's a crack, a very eerie sound. We are experimenting with the sounds of thunder and actual explosions.*

**MAC GILLIVRAY: What kind of an effect did you want the finished movie to have on the audience?**

*MILIUS: It's a very sentimental movie, like "HOW GREEN WAS MY VALLEY". It's a very hearty movie and has a wonderful physicality to it. You feel very healthy. You feel good. The story of "BIG WEDNESDAY" is a myth, but it's really like a piece of medieval poetry. Most of your epic medieval poetry is the story of friendship tested against a force of the supernatural. In "MOBY DICK" there is the supernatural; there's Moby Dick, more than a whale, more than a quest. In this case it's the "big day," the testing, when the gods test the men to see if they are worthy.*

**MAC GILLIVRAY: After "BIG WEDNESDAY" what do you have planned?**

*MILIUS: My next movie will be about the exploration of the American West by Jedediah Smith. After that I have a Kiplingesque story I've been working on for a long time about India at the turn of the Century. Those two are enough. I set my sights on something a long way ahead and then carefully plod along until it finally gets done. Most directors jump from project to project. I really work more in the way of a novelist. I don't really consider myself a filmmaker like Steven or George. I'm more of a screen novelist. I'm really more concerned with telling the story. I would be perfectly happy living a hundred years ago writing novels—as long as I could have my surfboards and my friends.* ■

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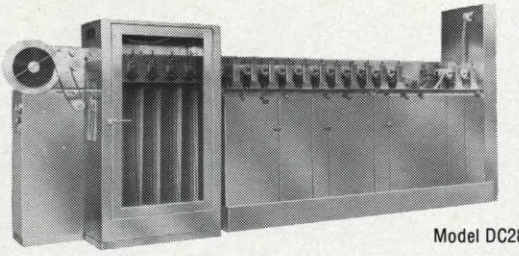

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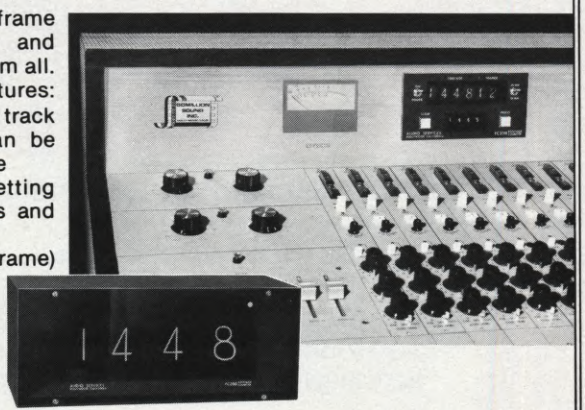


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**WATER PHOTOGRAPHY**
**Continued from Page 580**

ocean floor. With this in mind, eight of the waterproof cameras were designed to be extremely compact for use in the impact zone, with specific lenses and running at specific frame rates. The three other cameras were designed for shooting from the side of the wave in areas that were relatively secure compared to the primary impact zone. These cameras could be larger, thus capable of housing longer lenses and carrying the heavier 400-foot-load magazines.

Four months before the actual preproduction of "BIG WEDNESDAY" began, John and I discussed the merits of shooting the film either in the 1.85 "flat" format or in anamorphic 2.35 Panavision. At that time, it was my feeling that the anamorphic Panavision format was most appropriate for the subject of surfing. This format would present to fullest advantage the long watery walls, as well as complement the cameraman's ability to allow the surfer to paint his movements across a wide screen. Therefore, when John finally decided to use the Panavision anamorphic system, I was delighted. However, despite the overall advantages, there were some drawbacks to overcome in using this Panavision system in the water. Panavision has no extreme wide-angle anamorphic lens and the wider angle lenses the system does have are bulky and heavy. To overcome the lack of an extremely wide angle lens, those scenes that required a wide view were shot with a 9.8mm, 14.5mm, or 16mm spherical lens inside the waterproof housing. On editing the sequences, the shots made with the flat, non-anamorphic lenses were optically printed, scanned and then squeezed into the anamorphic format. This system allowed us the use of very small, lightweight, extremely wide angle lenses in situations in which the surfers carried cameras and shot film as they rode the waves. The problem with the weight and size of the Panavision anamorphic lenses was resolved by ordering lenses that were slow in speed, therefore smaller and lighter. Though most of the surfing footage in "BIG WEDNESDAY" was photographed from the water, using the specialized waterproofed cameras built for the film, we did also have back-up or protection cameras photographing from shore with Panavision's 2000mm, 1000mm, and 800mm telephoto lenses, which were as excellent in color and sharpness as are all their terrific lenses.

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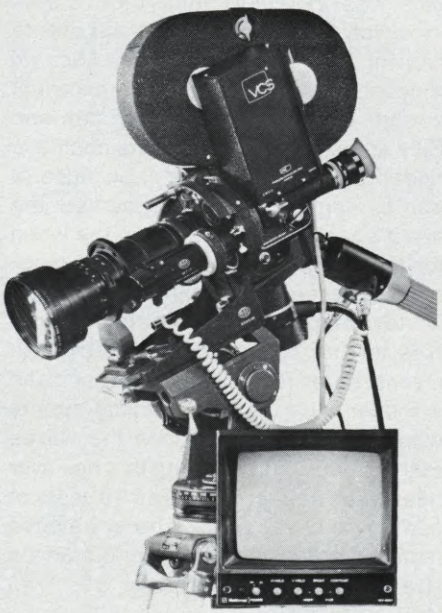

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moving the camera whenever possible. The moving camera involves the audience much more intensely and subjectively than a stationary placement of the camera. The chase scenes in "BULLITT" and "THE FRENCH CONNECTION", the incredible ski racing footage in "DOWNHILL RACER" and the involving hang-gliding action in "SKY RIDERS" all owe their intense excitement to the same formula: the camera moves with the subject, giving the audience the same sense of speed and proximity that the character feels.

Though this basic rule of action photography is difficult to apply in filming surfing, we still sought out every opportunity for utilizing a moving camera. We placed cameras on surfboards, in the surfer's arms, in a helicopter moving alongside the surfer, and in boats tracking in front of the surfer. Two of our miniaturized cameras were designed especially for hand-holding and mounting on the surfboards. From the tracking helicopter we used the Tyler mount with the Mitchell High-Speed Camera. For boat tracking shots, Nelson Tyler designed a compact, simplified version of the suspended camera mount that absorbs the intense and sudden movement of the boat as it moves along at a high rate of speed. These techniques provided us with some very unusual shots in "BIG WEDNESDAY".

*SOUND IN THE WATER*

Because much of the dialogue is spoken as the surfers are sitting amidst the large waves out of reach of the soundman's boat, wireless microphones were waterproofed and embedded into each one of the actor's surfboards. Whereas on paper, shooting a dialogue scene in the water appears relatively simple, in reality a number of additional variables makes this a very complex shooting situation.

For our story, we had to place three actors on surfboards sitting among breaking waves while the cameraman, also on a surfboard, tried to maintain a constant position in respect to his free-floating subjects. Making matters even more difficult was the dramatic necessity for a background of large surf.

Let me give you one example of the complexities. First, we positioned Jan, Bill and Gary with the proper natural lighting (obviously no reflectors or lighting units could be used in 15-foot surf) and waited for a set of big waves. Once the set began, we had only seconds to complete the scene. Hurriedly, the soundman on shore would signal that his sound was "rolling." John Milius, who was sitting on another surfboard behind me, would then yell, "Action!" and the actors would com-


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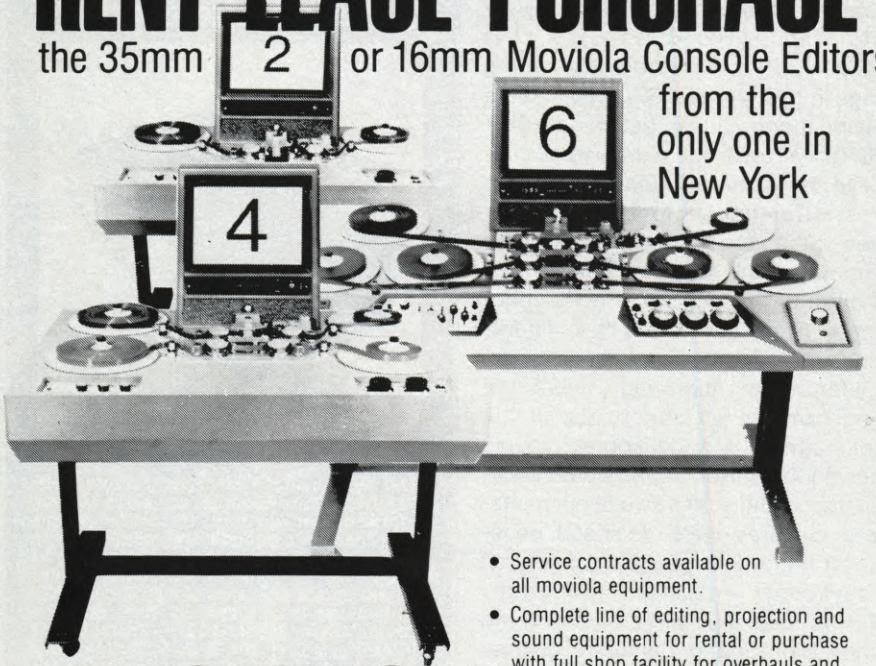

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plete their lines while hopefully not drifting out of position. Even with perfect performances by the actors, we often had to shoot at least ten takes to get the correct positions for the sun, surfers and waves.

### *THE SURFERS AND THEIR SURFING DOUBLES*

One of the most important considerations in shooting "BIG WEDNESDAY" was assuring high credibility and integrity. Because Hollywood has deluged the market with numerous phony beach party pictures about surfing, the choosing of the actors and their big wave doubles was extremely important. It was incredibly fortunate that John was able to cast in the leading roles Jan-Michael Vincent and William Katt, both excellent surfers. However, even though Jan and Billy are extremely fine surfers and have ridden big surf, John and I, because of our surfing backgrounds, wanted the finest surfing performances in the world for the big wave sequences. We guaranteed those performances by using world champion big wave surfers as doubles for the actors. Billy Hamilton, Ian Cairns, Peter Townend, Gerry Lopez and J Riddle were the five amazing surfers who gave performances on the waves that go far beyond anything that has ever been seen before. In my own 20 years of surfing experience, I have never watched more extraordinary surfing performances than during the filming of "BIG WEDNESDAY".

Our five champion surfers were selected not only for their surfing abilities and their resemblance to the actors, but also their particular surfing styles. While surfing style may not be appreciated by the inexperienced, to traditionalist surfers like John and myself surfing style and grace are very critical elements in appreciating surfing ability. The great care which was given to establishing the authenticity of the surfing in "BIG WEDNESDAY" lays the foundation for the overall credibility and integrity of the characters and their story.

### *THE TREMENDOUS CREW*

Of course, no film production is successful without the collaboration of many skilled and intelligent filmmakers. In the case of "BIG WEDNESDAY" the crew was magnificent. The following is a listing of the members of the Hawaiian crew which performed wonders in the big surf.

**CREW FOR WATER SEQUENCES**

| | |
|---|---|
| Director and Co-Writer | John Milius |
| Producer | Buzz Feitshans |
| Producer of surfing sequences | Greg MacGillivray |
| Co-Writer | Dennis Aaberg |
| Water Cameraman | George Greenough |
| | Bud Browne |
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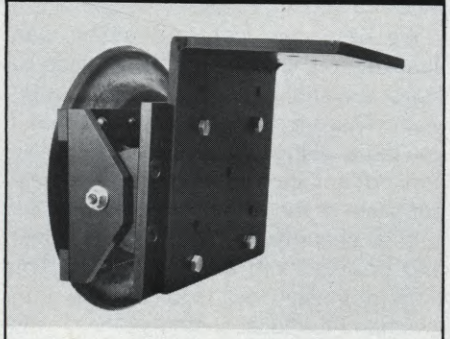

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| | |
|---|---|
| Telephoto Cameramen | Jack Willoughby |
| | Mike Chevalier |
| | Lance Williams |
| | Steve Lydecker |
| Surfing Masters | Bill Hamilton |
| | Ian Cairns |
| | Peter Townend |
| | Gerry Lopez |
| | J Riddle |
| | Jackie Dunn |
| | Bruce Raymond |
| Production Manager | John Wilson |
| 1st Assistant Director | Richard Hashimoto |
| Special Unit Consultants | Spyder Wills |
| | Fred Hemmings |
| | Roger Brown |
| | Pops Aikau |
| | Bob Lundy |
| Property Master | Eddie Aiona |
| Publicist | Kathy Orloff |
| Auditor | Don Mink |
| Script Supervisor | Judy Redlin |
| Sound Mixer | Eddie Mahler |
| Boom Man | Bud Fuellgrabe |
| Mattes | Peter Ellenshaw |
| Camera Assistants | Brad May |
| | Leo Napolitano |
| | John Walker |
| | Bob Stuard |
| | Fred Feitshans |

Because the production team of "BIG WEDNESDAY" was composed of those who were surfers or who had an appreciation for the beach lifestyle, the film became a labor of love for everyone involved. The story of three teenagers growing up at the beach in the sixties, facing the problems of responsibility and adulthood was one that we all could relate to easily. For these reasons, producing the wonderful and exciting water sequences of "BIG WEDNESDAY" was like a salute to the joys and pains of an era gone by.

*"I remember late in the chilled evenings, waiting for the last waves. I remember the rocks and the clear cold water. But now it all seemed to be behind us. The change wasn't in the beach, or the rocks, or the waves–it was in the people. Some got married, some moved inland, some searched for a new spot . . . and some died."* ■

---

*(ABOUT THE AUTHOR–Greg MacGillivray, who produced the surfing sequences of "BIG WEDNESDAY", is a director and cinematographer who co-founded the successful film production and distribution company, MacGillivray-Freeman Films, with co-partner Jim Freeman, who was killed in a helicopter accident in 1976.*

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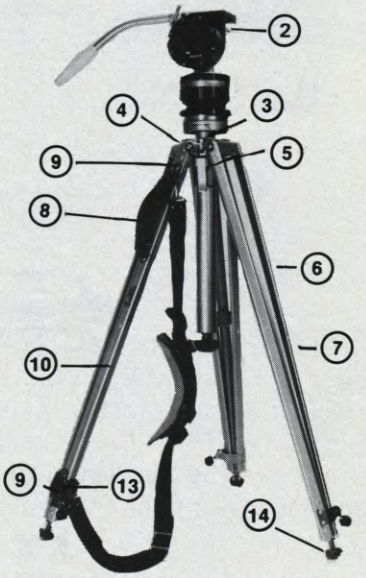


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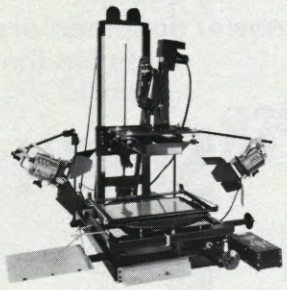

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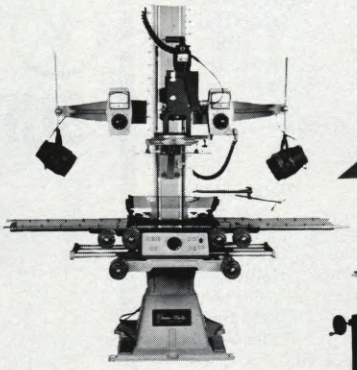

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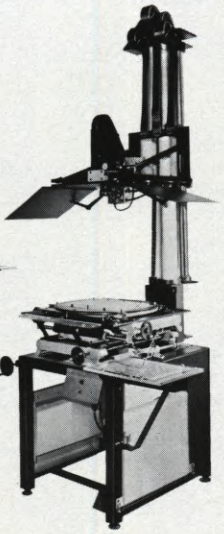

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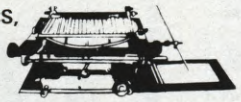

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**THE BERMUDA TRIANGLE**
**Continued from Page 594**

toms manifests. They are detailed lists containing serial numbers, description of items, origin of manufacture and approximate list price. The manifests, which should be stamped by U.S. Customs officials, simplify re-entry into the United States. The manifest sheets ran nearly forty pages and were useful as insurance documents, since our policy was on a per-item basis.

## GETTING THERE

Equipment and people got to Kennedy Airport on time. Customs expedited the red tape without hassle, and the flight to Puerto Rico was uneventful . . . we thought. What we didn't know at the time was that the equipment, packed safely in its own cargo container, failed to make the flight.

We have always made it a point of working directly with the baggage manager to ensure proper handling of equipment. Airlines will assign a special agent if you give them advance warning, and make sure you tell them you're a film production company. However, for reasons still unknown, our cargo container missed our flight, but made the next one. This created an unusual problem. In Puerto Rico we had scheduled a charter flight from San Juan to Tortola, British Virgin Islands, where we would meet *The New Freedom.* There would have been no problem had the equipment arrived with us. However, by the time the gear arrived, night was approaching and we learned that the airfield in Tortola did not have lights, so that when the sun went down, it closed down. Ten people and 60 cases had to stay overnight in Puerto Rico.

We had been warned that the San Juan airport is not the safest place to store expensive photographic equipment. That's a good thing to remember if you're travelling through the islands. We conned (or I should say *coined*) a representative of the charter airline to set up special security for the cargo container and checked into a nearby hotel. The next day we flew into Tortola and swamped the local customs offices with our considerable amount of equipment. No one bothered to open any of the cases.

## SHOOTING ABOARD SHIP

We arrived on the ship in a frenzy, but on time. If you're shooting on any of the islands on the Caribbean, remember that local transportation is geared to the tourist trade. Therefore, count on an extra hundred dollars or so every time you want to move people or equipment

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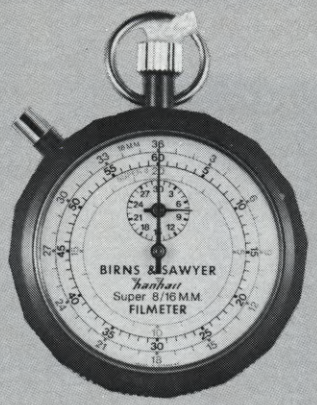


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from place to place. Rental cars are small, where they exist at all.

As mentioned earlier, finding storage for all of the cases presented the first of many problems we faced in shooting on a small ship. When we first saw *The New Freedom,* it seemed large to most of us who had never been to sea before. But as the days wore on, the living space grew smaller and smaller.

But with cases secured and the electrical problem solved, we set sail for two weeks in the Bermuda Triangle. The first thing we had to learn how to do on the ship was to walk, before we could shoot. Most of the filming was to be done handheld, as is the case with most of our documentary work. Holding a 25-pound camera or a Nagra with the ship lurching and heeling presents a severe problem. It took the better part of three days to reestablish our equilibrium. Even then, when we thought we had a steady shot, an unexpected wave would come crashing over the bow, throwing the cameraman off balance. One piece of invaluable equipment was the three-legged Limpet mount with a Ronford head. Each leg of this special mount has a large suction cup attached and the configuration of the legs is flexible enough to place it comfortably on odd-shaped areas of the ship's deck or cockpit. At one point we mounted the Limpet over the side of the ship—with safety harnesses, just in case.

Another serious problem of shooting at sea is salt water. It's everywhere. Most noticeable, of course, are the waves breaking over the side railing. But even on the calmest of days, there is salt water in the atmosphere. Even though it's not visible, at the end of the day, that highly corrosive film is covering the gear.

Fighting fatigue and sunburn became harder and harder as the trip progressed. The first few days of battle was against seasickness, which spread throughout the crew of scientists and film people. After that we found that shooting even for an hour at a time was especially draining. And after a full day's shoot, because of the small crew size, we were faced with changing magazines and preparing for the next event. Changing magazines was particularly dreary. Cabin heat often reached 110 degrees during the day and the normally easy task of reloading an NPR mag became complicated because of the constant rocking of the boat. If you were to let go of the magazine for an instant, the whole changing bag would be swept off the changing table.

Getting the camera gear from place to place in even moderately heavy seas was exhausting and dangerous. The captain warned us to be extremely careful, because the only thing between us

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and the open sea was a thin wire railing. There was little chance of rescuing anyone who fell overboard because of the time it would take to turn the ship around. During extremely bad conditions, safety harnesses were employed. Cinematographer/producer Larry Crowley, who covered the war in Viet Nam for CBS, remarked that filming on the ship was the most hazardous conditions he'd ever worked under.

There was also the problem of becoming hypnotized by the waves and sails. If concentration is lost, the inherent dangers of being on the ship are multiplied.

After awhile though, the minor cuts and bruises, bumps and abrasions, became routine.

### SYNCING

The trip was not without its lighter moments. One of the more comical ones came only a few hours out to sea when we first rolled the cameras. Not thinking of its double meaning, we shouted "syncing" as the cameras rolled for a take. Captain Fincham thought we had shouted "sinking" and was prepared to haul out the life rafts. We quickly changed the phrase to "slating".

The trip itself was exciting and capsulized many of the problems encountered in the Bermuda Triangle. There were instant storms, which have been blamed for many disappearances. One night we were sailing under clear skies, winds only one or two knots. Within minutes, the sea kicked up her heels and battered our small vessel with force 10 winds, 60 miles an hour. There would have been a danger of capsizing had we not been with a more experienced crew.

We were becalmed for several days and faced the possibility of running out of fresh water and fuel. That's been another serious problem within the Bermuda Triangle. On another occasion a boom spar broke, completely destroying an expensive mainsail. The scientists recorded a strange magnetic deviation on their sensitive Gaussmeter which was constantly monitoring the earth's magnetic field in the vicinity of the ship. That drop is still under investigation. And the psychics took us on some strange astral-body trips to the ocean floor.

But we returned from the Bermuda Triangle. We returned with 35,000 feet of 16mm color negative (7247), enough to put together an exciting documentary about the trip.

Salt water almost completely destroyed one camera rig. We lost a microphone baffle and a reflector overboard and a couple of batteries now lie on the sandy bottom of the Atlantic. But *we* didn't disappear. ■


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**Continued from Page 602**

*hitting you here, you've got another color from the window. You just accept it. In the early days of color everything was so rigid. Technicolor would send their consultant on the set with all sorts of meters and charts and everything else. They would shoot a grey scale and a color scale at the beginning of each take practically so that the lab would work with it. But they didn't have the same emulsions that we have now that are as wonderfully color balanced. They weren't as light sensitive as they are now. Also, the audience—and you people, I'm sure, too—accept on the theater screens a more natural look now. I mean, if the window is photographed without gels on it, you kind of accept it now; if it's right for the story. There are times when it can be objectionable. There are times when I see an unfiltered window, but it's blooming so much (and a fog filter is used on top of it) that it becomes a distraction. My feeling is that as long as nothing is a distraction, you can get away with it—or it will work for the story.*

**QUESTION: What kind of basic differences have you found in lighting for color, as compared to lighting black and white?**

*HIRSCHFELD: The main difference is something that takes a long time to learn. You have to learn the way colors will record in shades of grey. I'll give you an example: You can take a flesh tone and, let's say, put it against a pale green wall. And you have a good color separation, because the wall is green and the flesh tone is either a little more ruddy, or less ruddy. But it's a good separation. You take that same situation and put it on black and white film, and the face can be exactly the same tone of grey as the wall. That is one of the reasons why, in black and white photography, they often use very strong back lights—to rim the person with light. Then, no matter what the color of the wall or the background or drapes, it would separate the person from the background and give it a little more dimension. In color, they've been generally shying away from backlight, because a backlight has no color to it. You're actually reflecting the light of the bulb itself. You get very little color value out of it unless you put a filter on the light itself.*

**QUESTION: Do you find that in your black and white photography you spend more time putting more lights on walls and backgrounds and things**


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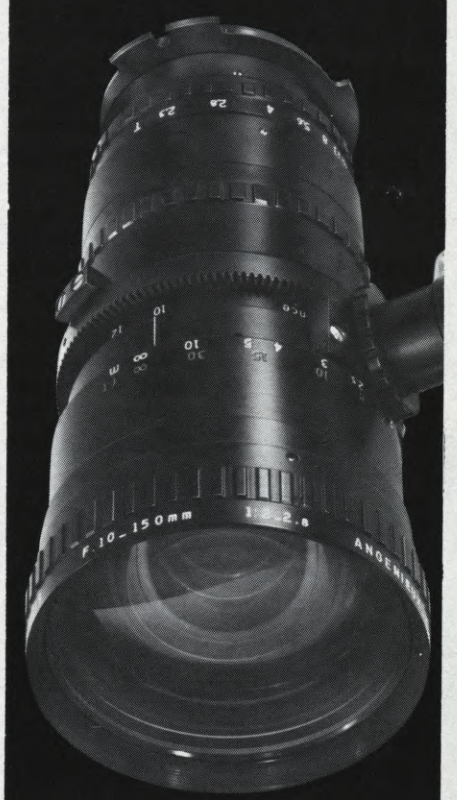


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**for that same reason?**

*HIRSCHFELD: Not really, because when I'm working in color I'll also try to separate my foreground from the background. I'll look through the camera much more, or use my viewing filter much more, in black and white than I will in color. I know that the film is going to react differently than my eyes. In color, my eyes are going to more closely approximate that of the film, but in black and white they don't. As I just said, red and green, which are two examples, can photograph exactly alike on black and white neg, depending on the density of the hue, or saturation of the color. But you'll never make them look the same in color. That's one of the reasons for using a viewing filter.*

**QUESTION: Who would be in charge for making sure, since you're looking at shades of grey, that a shirt isn't the same shade of grey as a face or background?**

*HIRSCHFELD: The Director of Photography. What happened very often on the set is that the wardrobe person or costume designer would come to me with fabrics. In the case of the negligee that Terri Garr was wearing most of the time during those night scenes, she came to me with it and I said, "We can't use it, as it is."*

**QUESTION: Was it white?**

*HIRSCHFELD: Well, she said, "It's been teched down." You know, they dyed it. I said, "It's still too light, because what I'm doing is increasing the contrast of the film. If you put that in the scene the eye will continually be going to the brightest thing in the picture. I can control it for a close-up, because you can shade it with nets and gobos and what-not. But in moving shots you can't do that. We need something darker than that." Mel was right behind me on anything I did, because he already had seen enough to know that I knew what I was doing. By the same token, Gene Wilder was to wear a couple of velvet jackets and they showed me a selection of fabrics. He said, "Well, it's supposed to be dark." I said, "O.K. We'll use this red, but not the maroon," or whatever it was at that particular time. I said, "The red will go dark, but the maroon will be black"; that kind of thing. It is your decision and you have to know what you're talking about. Otherwise, someone gets mad.*

**SCHWARTZ: I wanted to ask you a**

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**question about something that was brought to my mind a little bit ago. When you did the big scene in the theater where you did the dimming on the audience, was that a generator dim?**

*HIRSCHFELD: No. Actually, we did that out in Santa Monica, at that little Mayfair Music Hall on Santa Monica Boulevard. We used that little theater, which is used quite a bit. I'm trying to remember now what we did.*

**SCHWARTZ: I just wanted to mention it, because I don't know whether they're familiar with generator dims. Sometimes when you get into large sets where you would have to have a large number of dimmer banks to handle all the lights, what you do is you make a phone call to the plant on the lot where they're handling the juice. You're on the phone to them and you have them bring down the amperage; particularly in black and white you can do it. You just have them stand by. You preset what you want. When you're ready, you just tell them on the phone to take it down for you. It's a simple way of handling a huge set without having to go into individual dimmers.**

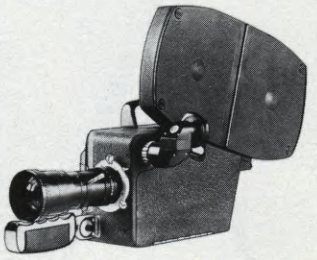
*HIRSCHFELD: Sometimes you get that effect when you don't want it. The generator konks out. I've had that happen already; more on location than in the studio. Sometimes it's just a matter of running out of gasoline. That happens, too.*

**SCHWARTZ: I had the lights go out one time. I wondered what had happened. I walked outside and the generator was on fire.**

*HIRSCHFELD: It happens.*

**QUESTION: One of the things I liked best about the look of the film was the change from the classroom to the next scene following the railway station. It's going from 1970 to 1945 backward. There's a sharp break there. Finally we're in Madeline Kahn's bedroom, which is again back to modern times. I was wondering who's inspiration it was to work that shooting differently. Did you use any films or studio styles as a model for the old look of the majority of the film?**

*HIRSCHFELD: Interestingly enough, you touched on a very tender subject that came up at the very beginning of this picture. First of all, the transitions, as they were called, of going from one set to*



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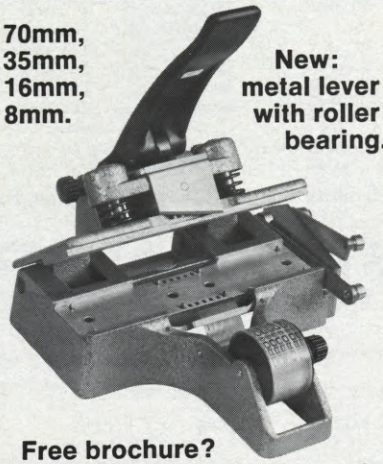

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*another set. Some scriptwriters will be very specific and the effects will be written right into the script. Other times it is left completely to the device of the director or the cinematographer. And then again, there are directors who are primarily performance directors. They are not that involved with the technique; not that they don't know it, but they're not that involved in it. They would rather get the performance out of the actor and the dramatics of the scene. They'll depend very strongly on the cinematographer to work these transitions. Very often, as you get into working on a film, an idea will come to you. You'll say, "Wouldn't it be great if we do this thing at the end of this scene. Then when we go into the next one, it can be a shot cut; or from a long shot you go to a close-up. You think you're in the same set and when you pull back you're in another set." You work that out with the director as you're going along. As far as the look of the picture is concerned, one of the first things that happened when I went over to 20th Century-Fox Studios was that Mel Brooks said, "We've got the screening room reserved. We're running 'FRANKENSTEIN' and 'THE BRIDE OF FRANKENSTEIN'." We went to look at it. Of course, they were 16-millimeter dupe prints, which are not the greatest quality in the world, but I could see the type of lighting that they had. It had been some time since I had done any black and white work. We started to shoot some scenes at the beginning of the picture. Mel Brooks called me into his trailor on location and said, "What did you think of the dailies?" I said, "I think they were fine. A couple of the scenes were printed too light, but otherwise it's fine." This was before he'd gotten into it. You're working with one light prints, which is another subject. But he said, "Well, I think it's terrible." I kind of looked at him. I figured maybe he was pulling another joke on me, you know. Gene Wilder was there. And he said, "That's not what we wanted at all." I said, "Wait a minute. You showed me 'FRANKENSTEIN'. You showed me 'BRIDE OF FRANKENSTEIN'. I think this fits in perfectly with that." He said, "Oh it does, but that's not what we want." I said, "Well what do you want?" He said, "We're doing a satire. We want you to satirize that type of cinematography. We want it to be more than it was." I said, "Oh. You didn't say that before. Take a look at tomorrow's dailies. I'm going to try several things tonight. You let me see which one you might like." The next night at the dailies they said, "Oh, that's it." Then another scene with Kahn, "Oh. That's even better." And another one, "Oh! That's even better." When the lights came up (I guess you have to be a little*


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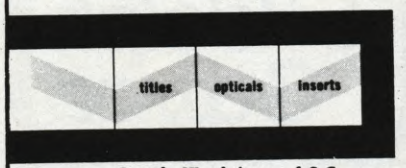


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*ballsy at times), Gene Wilder was sitting there and Mel was in the back. I said, "Gene, you know I do understand the English language. I'm a fairly astute and experienced cameraman. Do you realize that last night was the first night that you or Mel had made any comment or suggestion as to what you were looking for in this picture? When I had asked what you wanted, you showed me the other pictures." He said, "Jerry, you're absolutely right, but this is what we want." So from then on we had no problem. Then about three weeks or so later, Mel put his arm around me coming out from dailies. He said, "Gee, Jerry, I'm glad I didn't fire you that first week." So I felt like telling him, "You're lucky I didn't quit that first week."*

**SCHWARTZ: This is an example of the lack of communication you encounter sometimes.**

*HIRSCHFELD: Yes. I learned a lesson from that. I'm very specific when I start a film now. But I really think that if your job is cinematography and the director and producer say, "We want you to see these films," you assume they're showing you the film because of the look. For no other reason. That's what I was doing then, but now I ask for a clarification.*

**To be continued**

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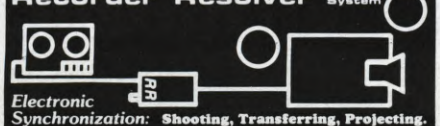

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Continued from Page 542

signers merely moved the ground glass of the 16BL back slightly to recess it from the light path. However, you must remember that the film plane and ground glass must always be exactly the same distance from the mirror. So in recessing the ground glass back, the mirror-shutter had to be moved forward in order to maintain the required distance—and here is the crux of the problem.

The mirror shutter in the 16BL and 16SR is located just slightly forward of the position it normally occupies in the 16S, 16M and 35 2C. As a result, the Arri 16BL and 16SR have just a hair less room between the lens seat and the mirror than the other Arri models. In some cases, the clearance between the rear element of the shorter focal-length lenses and the mirror shutter is extremely small, and while there is sufficient clearance with the other Arri models, the shutter of a 16BL or 16SR can actually hit the back of the lens. The worst case was that of an unlucky cameraman who inserted one such lens into his Arri 16BL. Because the lens was focused at a short distance (racked away from the seat), the rear element cleared the mirror. The camera was turned on and with the mirror spinning, the cameraman began to focus toward infinity, screwing the lens slowly backward. He never made it. Before he could reach the infinity position, the rear lens element became very intimate with the rotating mirror.

The Arriflex 16BL and 16SR handle quite well with fixed focal-length lenses. However, check with Arriflex before inserting a lens into your 16BL or 16SR. Arri supplies a list of lenses that can be used with those cameras. The list consists of GROUP I lenses and GROUP II lenses. The GROUP I lenses can be employed with the Arri 16BL Universal Lens Housing for extremely quiet operation. The GROUP II lenses are safe to use with the 16BL, but cannot be used in conjunction with the Universal Lens Housing and, thus, camera operation will not be as quiet. The 16SR can use lenses from either GROUP I or II.

These two groups include *almost* all Arri lenses, so the problem of incompatibility is extremely rare. However, those few lenses that do not appear on the list could cause havoc. Lenses that *cannot* be used with the 16BL and 16SR are usually under 24mm and include the old Schneider 10mm and 16mm, as well as some short focal-length Cookes. All lenses above 24mm, as well as all Zeiss lenses, are safe. Check with Arriflex if there is any doubt. The sound of crunching glass will definitely spoil your day. ■

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ANGENIEUX 12-120/Arri standard mount, sharp, $900. Sennheiser MKH 804 shotgun microphone, $320. SF&T INC., 7625 Bush Lake Rd, Minneapolis, MN 55435 (612) 835-3565.

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ARRIFLEX BL good condition, late model Angenieux 12-120 zoom, built-in light meter, call (206) 282-7815.

ARRIFLEX M Outfit complete. FABER, Box 4713, Scottsdale, AZ 85258. (602) 948-8086.

CAMERA: Mitchell NC 35mm., Excellent condition. (213) 829-2132. 3032B Exposition, Santa Monica, CA 90404.

RCA model 400 single case 16mm projector, very nice, $110. Bolex SBM, used very few times, positively mint (body only), $500. Rodenstock 50mm f1.9 "C" mount lens, new excellent, $40. Sony ECM-16 microphone, new in carton, $25. PAUL GROSS, P.O. Box 635, Wisconsin Rapids, WI.

VEGA 55/57 wireless mike system-used-100% warranty, $795. Guillotine-Ciro 16 2T Tape splicer, used, $149. IDI T-shirts-orange & white, new, $3.50. Arri 352B pkge, no lenses, $2695. IDI Dataslate I, new electronic slate device, $295. IDI Buys-Sells-Trades Film Equipment. IDI. Call (305) 945-1111 or (404) 996-0000.

ECLAIR NPR, Ciblo/Communication Arts crystal motor, Zeiss 10-100 zoom lens, 2 mags, batt pack, charger, case, fluid head tripod, $5700. Siemens interlock 16mm projector, $1500. Call IMJ INC., (617) 232-9686.

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NEW C mount Angenieux 12-120, $1575. Pan Cinor 12-120 C mt. $625. Swintek HH Mark—IV wireless mic., $950. Bolex monopod, $75. Cine Kodak Special II, 4 lenses, $485. (213) 559-3113.

MUST SELL . . . . . liquidating. 16/35mm animation stand w/aerial image, compound etc. Arri "S" w/12-120 Ang, power zoom, five add. lenses, periscopic finder, mags, batteries. O'Connor "50" w/two sets legs, spider, cases. Lowell & MR quartz lights, stands, access., cases, cables. Editing: viewer, reader, 16 & 35mm multiple synchronizers, 16/35 hot & mag splicers, rewinds. 16mm BH sound projector self thread. 16mm BH sound interlock opt/mag. 35mm Simplex 4000 ft. sound w/1500W lamp & strong arc, cases. 16mm Houston reversal processor, 16/35mm neg/pos Houston. B&H model "J" w/auto fader, power supply, B&H "D" 35mm printer, many other items. No reasonable offer refused. LS FILMS, 3214 Gillham Rd., Kansas City, MO 64109 (816) 561-6300.

FOX STUDIO 35mm cameras with crystal sync, prime and anamorphic lenses. For rent or purchase. #1820 AMERICAN CINEMATOGRAPHER. (213) 662-4507, 463-5903.

SALE—Limited quantity ANGENIEUX 12-150mm T2.2 zoom lenses, brand new in "C" mt. std. Arriflex, Eclair and Cinema Products mts. $1495. Call or write for other mounts. 1 year warranty by CENTURY PRECISION CINE OPTICS, 10661 Burbank Blvd., N. Hollywood, 91601 (213) 766-3715.

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WANTED: Professional Motion Picture Equipment, 16mm and 35mm cameras, lenses, lights, sound, editing, projection, lab, for outright purchase or consignment. Supply complete technical description and price for immediate reply. Ted Lane. ALAN GORDON ENTERPRISES INC., 1430 Cahuenga, Hollywood, CA 90028, (213) 466-3561.

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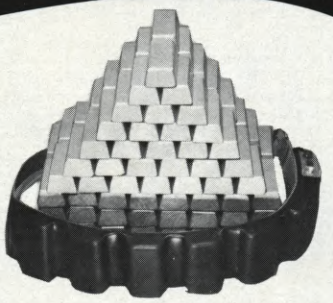

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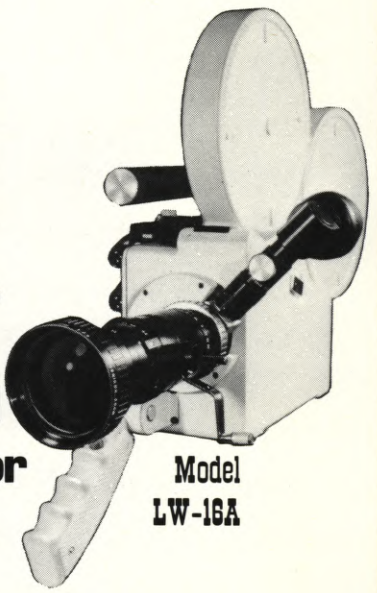

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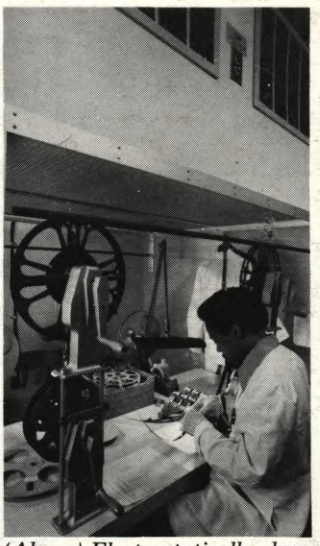

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